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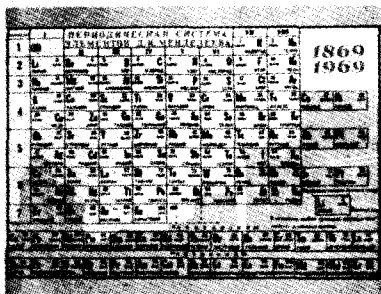
May-June 1969, vol. 60, no. 5

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Hemispheres Apart
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Editorial	267	
The Librarian-Customer Relationship	269	Norman J. Crum
Time Lag in the Flow of Scientific Information	278	Julian A. Grossman
One Library in Two Hemispheres	285	Charlotte M. Cardon
An Automated Library System Proposal	288	Meyer Cook
Reclassification from Dewey Decimal to LC in Subject Blocks	297	Betty Roberts

SLA News

The People Speak!	299	Robert W. Gibson, Jr.
Election Returns	301	
Members in the News	302	
Statement of SLA Regarding HR 8839	304	Herbert S. White
Call for Papers—1970	307	
Chapters & Divisions	309	
LTP Reports to SLA	310	

Vistas

Letters	311	Reviews	317
Have You Heard?	313	Pubs	318
Have You Seen?	315	Placement	23A
Index to Advertisers	28A		

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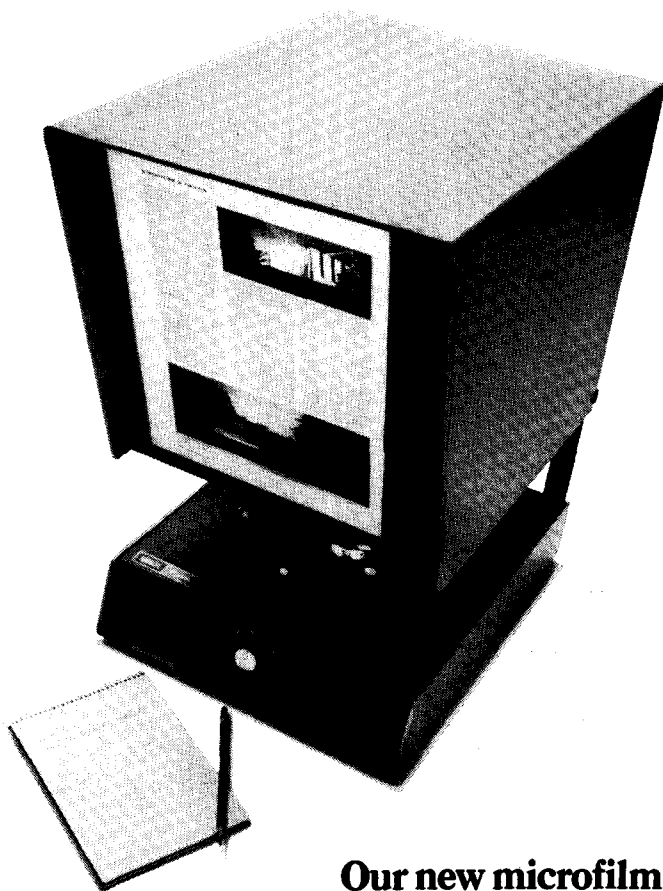
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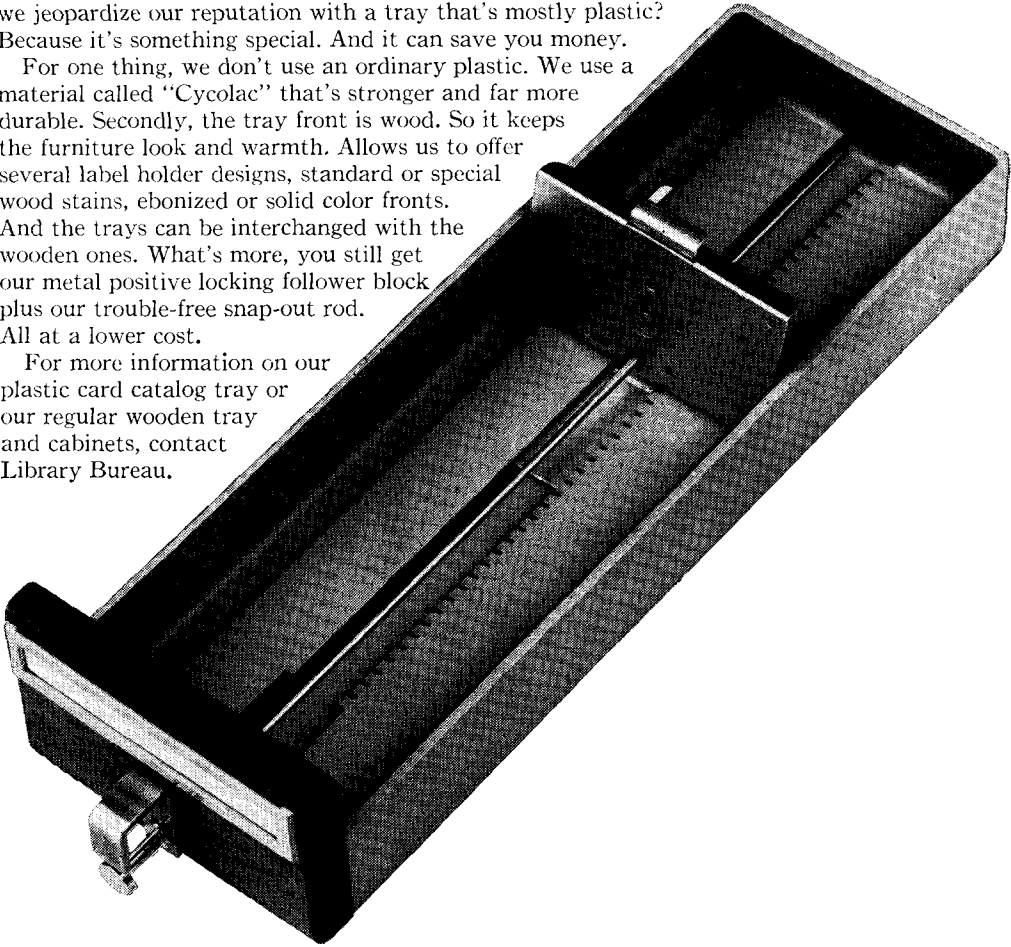
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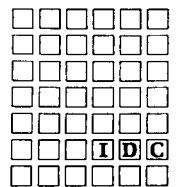
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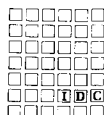
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Revision of the constitution to define the Board as a permanent body (but amended to prevent the Board from increasing dues without membership approval), to employ a paid executive secretary (with a stated way to terminate his services), and to establish an advisory body . . . were some of the concerns of our business sessions.

A talking picture, *The Bridge of San Luis Rey*; early morning airplane rides over the Conference city; an ad for the "first American book on television" (\$2.75), another ad for "Gloopaste" (\$1.50 a gallon). . . . Hotel rooms at \$5 and up; dinners from 60¢ to \$1.25 at The Ugly Duckling Tea House; an Anniversary Dinner with *only* three afterdinner speakers; an afterdinner dance (not too successful because of a shortage of men) . . . a group photograph on the White House lawn with President Herbert Hoover. . . .

Such was SLA's 20th Annual Conference in 1929. There were three days filled with twenty meetings, and a fourth day for the Commercial-Technical Group because of its complex problems due to its subcommittees. . . . Early morning breakfast meetings . . .

There were joint meetings with three other library associations: a half-day with ALA (a triennial event at that time), and a three-way half-day with the American Association of Law Libraries and the National Association of State Libraries.

The Association's secretary, Rose L. Vormelker, reported 1,122 members (but 155 had not paid their dues). The executive secretary was confused by the renewal records because associate members joined the local Chapters and could not be identified in headquarters records, and because dues payments from companies did not include the names of their librarians. The resulting correspondence load had become so heavy that a full-time typist had also been employed.

With the organization of the Detroit Chapter there were eight Chapters and one affiliated local association. Two new Groups (Museum and Civic-Social) brought the Group total to six (later called Divisions).

'29 + 40 = '69

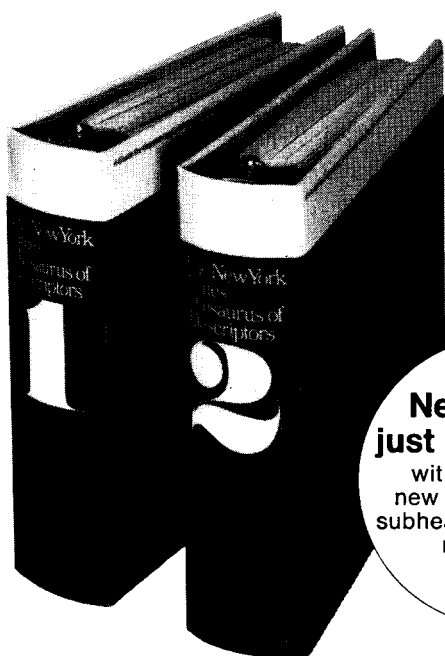
The SLA/ALA joint meeting on May 14, 1929 heard a report from The Committee on Recent Economic Changes (U.S. Dept. of Commerce): radios instead of pianos, automobiles instead of top buggies, one million students entering college each year instead of thousands, the development of backward rural areas, a decline of the cities. . . . Although SLA was not blamed for the stock market crisis later in the year, the N. Y. Financial Group had scheduled its meeting on the fateful Monday (Oct 28, 1929) at the Federal Reserve Bank to hear a discussion of investment trusts and to see a moving picture of the N. Y. Stock Exchange.

With the Association's membership—at that time—aimed at persons in library, statistical, and research work, the dues were \$5 for active members, \$1 for associate and \$15 for institutional members. Although the year's income of \$8,900 was offset by expenses of \$8,700, there was debate about the need for a separate *Proceedings* (referred to a committee). . . . How to finance SLA exhibits at meetings of other associations. . . . The placement activities of a volunteer employment bureau in the New York Chapter (340 registrants and 36 placements). . . .

Forty years later, our Montréal Conference program parallels the concerns of the clients served by special libraries. No editorial comment is necessary to note that some of the same problems of structure and services are still with us. If these cannot be resolved or if they are beyond our means, it may be well to lay them to rest, and then turn to newer problems.

Anonymous social notes from the 1929 Conference record the need for medical attention by two members—followed by additional therapy in the form of rides in the doctor's Packard. But even an oblique allusion to an amorous "Major" does not reach the journalistic heights of the anonymous *stabbing* in Swampscott reported during SLA's Conference there in 1925!

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special libraries

The Librarian—Customer Relationship

Dynamics of Filling Requests for Information

Norman J. Crum

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■ The steps in the process from the time a customer asks for information until the special librarian gives him acceptable answers are analyzed. From this generalized description, there follows an examination of the major barriers in the interaction: physical, personality, psychological, linguistic, and contextual. Some suggested approaches to alleviating these barriers are offered. Establishing and maintaining a customer-orientation is considered the most vital method of reducing customer-librarian barriers.

THE BLIND adult who first gains his vision must painfully learn to see as though he were a baby just learning to see. Similarly, the special librarian, anxious about his role in a complex and computerized world must learn to see anew even though it also is painful.

Let's start by seeing ourselves as our customers see us. If we traded roles with our customers, would we seek out and welcome the assistance of librarians like ourselves?

Put yourself into the picture as we look closely at what happens from the moment a customer first recognizes an information need until he has received what he feels are acceptable answers. Let's assume the organization is one with a relatively homogenous and compact clientele having a scientific-technical-business orientation.

The Stage of the Customer-Librarian Drama

First, an overview of the stage upon which the customer-librarian interactive drama is played. The first character, the librarian, is impelled onto the stage by a sense of service and responsibility—his professional credentials. The customer is moved to appear because of his need for assistance in obtaining needed information. Figure 1 symbolizes these two characters playing their individual

Figure 1. Simplified View of Librarian-Customer Interaction.

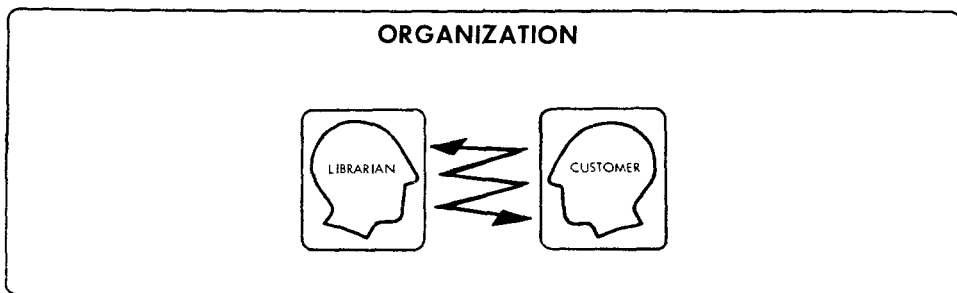
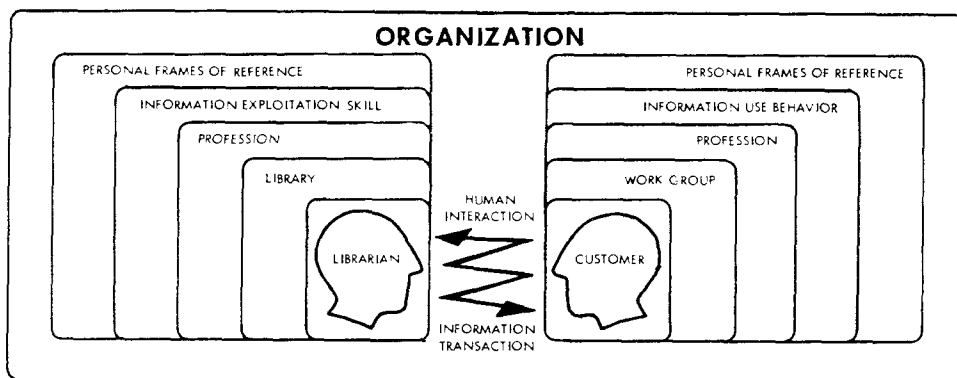


Figure 2. Partial Context of Librarian–Customer Interaction.



roles on a common ground, the organization which they both serve.

Figure 2 shows that the librarian's performance is dependent upon and affected by his personal frames of reference, the library itself, his profession, and his information exploitation skill. The customer in turn is dependent upon and affected by analogous though not identical components. Both the customer and librarian exchange, not only information, but also a variety of feelings and emotions.

The full context of the librarian–customer interaction is produced by analyzing the sub-factors in each of the environmental components. Figure 3 results when this is done for the organization only. Note such familiar characteristics as management, type of organization, category and range of R & D, size and funding. This analysis dramatizes the fact that the reference librarian always operates in an extremely complex environment which is inherently unstable and never perfectly understood. Often the rapport, skill, and knowledge of the "model librarian" are outweighed by the environmental factors that are known and unknown, conscious and subconscious.

Assumptions Before Initial Interview

Who is the customer? What are the characteristics of his question?

Figure 4 shows the library is one of a dozen or more information channels which

the customer may utilize. From the librarian's viewpoint, the key questions are:

- Which channels are or have been utilized and for what purposes?
- Does he have sole or joint responsibility for satisfying the customer?

Assume also that the customer is an initial library user who is filling his own information need, not that of someone else. The customer's requirements cannot be satisfied without at least one follow-up meeting after the initial interview. Finally, the situation requires "negotiation" or a process of iterative reformulation and refinement of the initial question.

Stages of Customer Questions

Taylor (1) has noted four levels of questions in the information query area (Q1, Q2, Q3, and Q4 in Figure 4). Q1 is the stage of actual, although inexpressible, physiological need for information. When this subconscious feeling becomes conscious, the "within-brain" description of the process has been reached, Q2. Q3 is the "expressed need"—at this stage, the customer may seek an answer from a co-worker. The final stage is the "compromised need" or the question, Q4, which the customer *actually* presents to the information channel. It is vital for the reference librarian to mentally walk the customer back from the Q4 to the Q3 stage

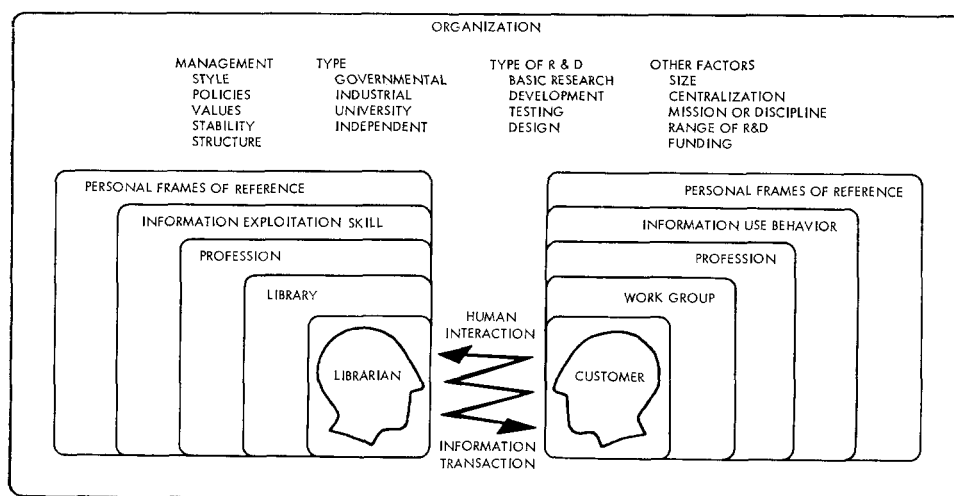


Figure 3. Component Example of Total Context of Librarian-Customer Interaction.

(and earlier ones if possible) in nearly all negotiated inquiries.

Conditions Surrounding Customer's Question

Let us assume in Figure 4 that the customer selects the library as the sole information channel to handle his query. The critical questions then become:

- Under what circumstances is the customer turning to the library?
- *When* is he turning to the library?

Is the customer coming through his own choice—or because his project manager has requested it? Has his research reached a critical stage that demands quick answers? Is he coming as a last resort—after all other information channels have been tapped without success? Where does the customer fit into the project team and what is its size, duration, content, viewpoint, and importance? Answers to these and similar questions strongly affect the expectations and receptivity of the customer and should cause the librarian to adapt his approach accordingly.

Time Classes of Customers

Customers may often be usefully grouped according to the times at which they seek library assistance. For example, the “early birds” come at the Q2 stage (Figure 4)

soon after first consciousness of an information need. Their vague and fumbling words betray large areas of doubt and insecurity. At the other end of the time spectrum are the “late bloomers” who may have passed through the Q1, Q2, and Q3 stages of the question, but have procrastinated in actually putting a question to any known information channel; they have, at least, not consulted the librarian. These customers may be using the library as a last resort; they often ask piecemeal questions which may be faint echoes of their real information needs.

Between these two groups of customers are myriad variations, but perhaps the most significant one is the precisionist. It is he who has thought a great deal about his information need and has high confidence in his ability to pinpoint the proper question. He is, however, over-specific and this prevents the librarian from learning enough about the context of his *real* information need to effectively negotiate the question and provide a pertinent response. In Figure 4, this customer may be pictured as “frozen” at the Q4 stage and refusing to allow the librarian to mentally “walk him” back to the Q3 stage.

The Reference Interview

Understanding these background factors, we can trace the major steps in the libr-

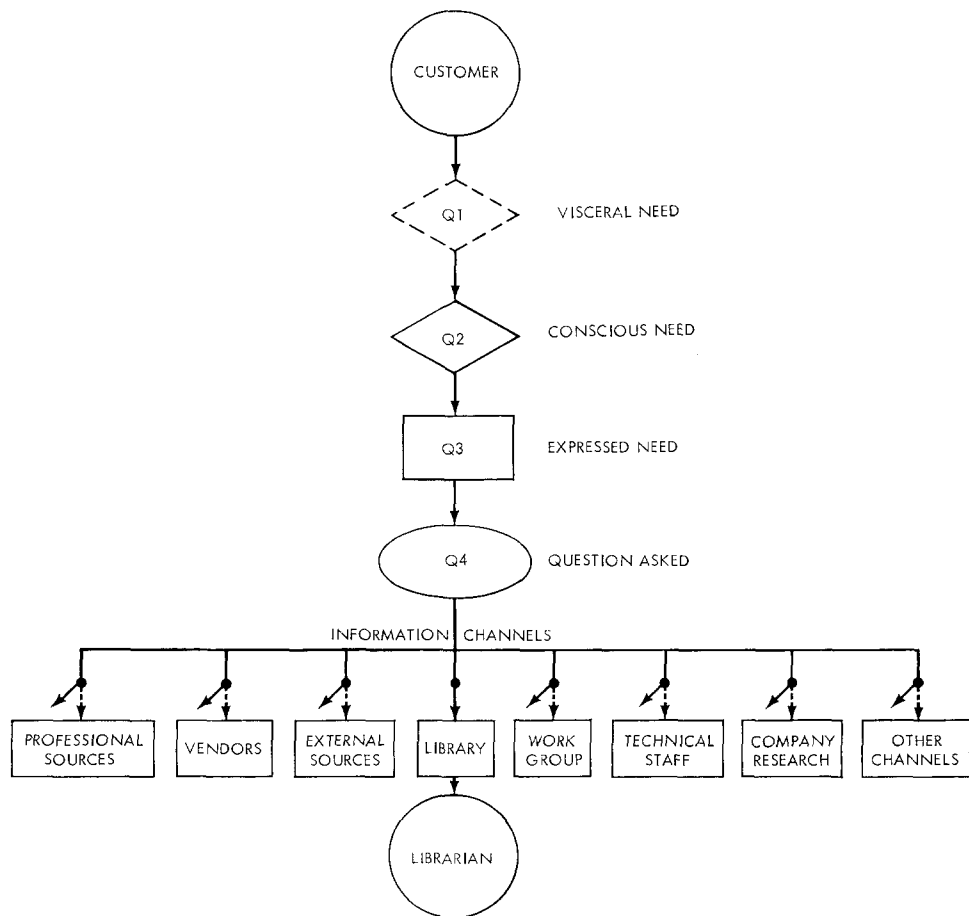
ian—customer interaction (Figure 5). The “loops” indicate the more critical lines of feedback in the process of negotiation, reformulation of the question, search, and response to the customer. This feedback enables correction of course by the librarian and customer as they mutually seek to find an acceptable question to present to the file system. In a broader context, it is the inquiry that influences the answer and its utilization; this, in turn, controls new questions, future file organization, future answers, and ultimately, further utilization.

Although the librarian usually begins by being interviewed, he rightly assumes the role of *interviewer* as early as feasible. He attempts to quickly put the customer at ease and seeks to establish good rapport. He hopes the customer is approaching him not

with a set request or “command” but with an honest “area of doubt” (2) which allows mutual exploration and eventual agreement on the question which satisfies the requirements of both the customer and the file organization. He greatly contributes by setting the tone of the interview as permissive and open-ended, rather than highly structured and specific in goal. By adroitly and diplomatically asking only the necessary questions, the librarian and customer jointly construct the reformulated question (Figure 5).

Since the above represents the idealized situation, let us now examine the major barriers in the process—physical, personality, psychological, linguistic, and contextual. This will be followed by suggested approaches to reducing these barriers.

Figure 4. Process: Information Need to Question Presentation.



Physical Barriers

Do the librarian and customer meet in the librarian's or customer's "territory"? If the setting for the interview is provided by the former, does the interview take place in the librarian's office, behind the reference desk, or in a casual open library reading area? Perhaps the worst barrier is traditional ensconcement behind the reference desk—the distance from the customer suggests keeping an opponent at a distance while the relative positioning otherwise implies the carrying out of a custodial function. Whenever possible, the librarian should meet with the customer in his territory—either his office or work area. This comes closest to insuring that:

- 1) the customer has full confidence that the librarian's attention and interest are focused on meeting his needs;
- 2) that the customer may rightfully assume that confidential statements will not be compromised; and
- 3) the customer feels most comfortable and secure in familiar surroundings.

Personality Barriers

The reference librarian is engaged in a "drawing out" process which requires empathy, sensitivity, and related qualities that enable him to "size up" people and situations. He at the best, however, can achieve only varying degrees of success since, as has been shown, he functions in an inherently unstable environment. In spite of this, he must keep his "cool" with customers who provide only limited, if any, feedback. The ingenious librarian will constantly seek ways to relate to customers by displaying warmth, interest, and approachability—qualities that are intuitively sensed by the customer.

Communications Barriers

The alert librarian will keenly observe any verbal or non-verbal cues which help unmask "OK" language and professional lingo. Individual differences in knowledge and skillful use of language contribute to this barrier as do the highly specialized and often advanced vocabularies of many scientists and technical personnel. An even more intractable

problem is how customers can phrase adequate questions to secure information of an unknown nature. Many customers do not know the proper questions to ask until they are well on their way to finding the answers! We should be alert to finding any substitutes or auxiliaries for the question that will help customers in querying the library.

Professional and Psychological Barriers

Allen (3) has found that engineers and scientists often feel that asking a question means admitting ignorance—and this may be too high a price to pay in terms of lost prestige among their co-workers. The observation is especially true of either young professionals or of more experienced customers taking on assignments in new and unfamiliar subject areas. Librarians have been known to knock down this barrier by frankly stating, "I'm sorry, but this subject means nothing to me. Will you please tell me more?" Such honesty may put the customer at ease and

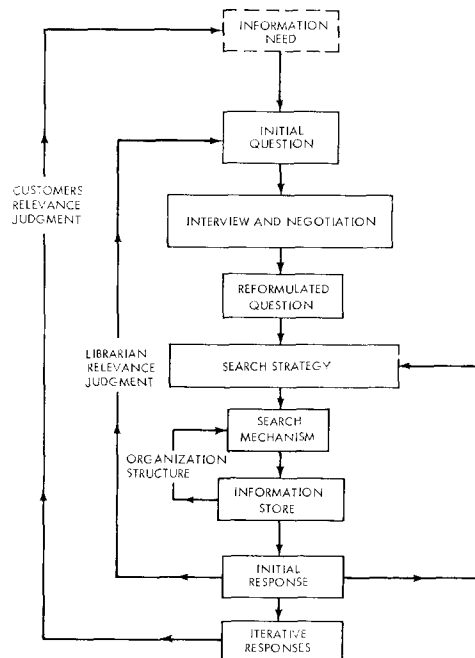


Figure 5. Process: Information Need through Customer's Satisfaction

even result in his admitting that he doesn't know much about it either!

"Moore's Law" best describes the psychological barrier: "An information retrieval system will tend *not* to be used whenever it is more painful and troublesome for a customer to have information than for him not to have it" (4). Being in possession of information can indeed be painful and troublesome because it requires reading, understanding, thinking, and often, deciding and acting. If the customer's manager or co-workers also discourage library use, it is easy to see that this barrier can become the customer's as well as the librarian's worst enemy!

Negotiation Process

This process itself usually has five main steps or "filters" according to a survey of twenty special librarians (5). These are: 1) subject definition, 2) determination of the objectives and motivation of the customer, 3) personal characteristics of the customer, 4) relationship of inquiry description to the file organization, and 5) the nature of anticipated or acceptable answers. The most noteworthy step is the second one. Finding out *why* the customer wants the information often cuts the search time in half and usually determines the priority, depth, and form of response.

Interview Termination and Initial Response

Just as the good pilot has a mental checklist to prepare for a landing, so does the model librarian mentally review several points before terminating the interview:

- What is the general format and sequence in which materials and/or answers are wanted?
- Should the librarian warn the customer of any expected difficulties he foresees?
- Has the customer been told *when* he may expect interim or final answers?
- Is now a strategic time to request a definite appointment to explain the search results?

With satisfactory answers to these questions, the librarian is ready to start the search—that is, if the customer will stop talking long enough!

After the search is finished, there remains the considerable task of tailoring and conveying it to the customer. This means the selection of precisely that quantity and quality of information which will help the customer fill his *real* information need. It also means screening out misinformation and inadequate information. These quantity and quality control functions are most effectively performed by responding to the following questions (6):

- What is the customer prepared to read?
- How much of what the customer receives is he prepared to read?
- In what sequence does the customer want materials and/or answers?
- How much time is the customer willing to spend with the information provided?
- What value will the customer place upon the information provided him?

Customer Expectations on Response

Every customer has conscious and/or subconscious expectations as to the "size, shape, and form" of the response to his question. Martyn has surveyed scientists on what they consider "adequate initial material" (7). Forty percent of the sample favored having only about six relevant papers. Similar studies also indicate that customers expect a tailored package and not simply a pile of materials which often merely add to their information overload. The customer has little interest in the information "container" but instead wishes it in the form that he can most easily relate the information to his own personal data base.

It is sometimes advantageous to provide customers with "interim" answers or materials so as to provide early feedback to the librarian and give concrete evidence to the customer that his question is in process. At other times, it is better to allow collected materials to "bunch" before conveying them to

the customer. This allows time for the librarian to better assess the relevance, specificity, and completeness features. For especially important customers, he should provide a precisely tailored product usually in the form of a summary-analysis.

Conveyance of Response Need for Second Interview

As previously noted, the librarian's greatest frustration is often the lack of needed feedback from the customer who has been furnished materials or answers. Sometimes feedback may be secured through third parties. However, the best way to get immediate feedback is to follow up with a second interview. This may bypass the effects of Mooers' Law since the customer can often be enticed

Tasks after the Second Interview

Searches of long duration or special importance should always be reviewed preferably with the customer. The customer gains needed insights into how to more effectively query the information system. He may also learn about additional unused information services and sources. The review can add to the credibility of the library's effectiveness in the customer's judgment. The librarian gains vital feedback on the general level of satisfaction of the customer. This might well result in changed patterns for this or other customers. Other important feedback can be transmitted by the searcher to the indexers so that they can be more responsive to real customer needs and approaches in querying the information store.

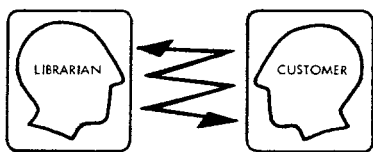
Should the librarian bring the customer to the library—or take the library to the customer? Ideally, the library would be a process and not a place at all! Since this is impractical, the librarian can best approach the ideal by actively seeking to understand the information context of each customer—and then selectively filling the customer's real information needs. This often means anticipating information needs before the question is asked. The ingenious librarian gets voluntary feedback and, if necessary, forced feedback from his customers so he can keep "on track" in seeking to achieve organizational goals, rather than strictly library goals.

into scanning at least one promising piece of material. The second interview has these additional benefits:

- The librarian can transmit personally any special insights developed during the search.
- Allows a cross-checking of the librarian's and customer's judgments as to whether the original information need has been filled.
- The librarian keeps "on track" by determining first-hand if the original question has been removed, modified, or superseded by a new information need.
- The librarian learns if the original search should be expanded, narrowed, or otherwise modified.

The Barrier Problem

Although the foregoing analysis has focused on a generalized, single, and rather complex transaction, one can postulate many gradations of complexity involving varying questions, customers, and situations. The process can often be telescoped into five minutes or less. There may be no need for a second interview or for a later post-mortem. It may be unnecessary to take each step in sequence. There may be continuous or intermittent working on a problem-question. Let us now look at some ways that the barriers in the customer-librarian relationship can be alleviated or removed.



Librarians as Communication Links

Librarians must increasingly visualize themselves as communication links between themselves, the library, and the customer—and even with other parts of the home organization or outside organizations. Because of their strategic location in the information networks of many organizations, they can do this most effectively. They will seek every opportunity to insert themselves as active elements into the formal and informal information networks of their organizations. Librarians can often best answer an inquiry by discreetly putting the customer into direct contact with other scientists and engineers—usually in the same organization.

Barriers Reduced Through Informal Contacts

It is surprising how often real information needs first become apparent in the course of general conversations between librarians and other staff members. Extending assistance to members with special non-library needs often breaks down personal and organizational barriers. Most important is meeting with customers in their own offices and daily work environment. As long as it remains casual, regular but random walks through hallways at various locations can provide helpful clues on the real information needs and context of the clientele.

Direct Assignment Reduces Barriers

Wooster (8) has described a most effective barrier-breaking technique used in the Radar Research and Development Establishment, LRDE, in Bangalore, India. A scientist or engineer hired by the library is assigned the liaison function between the library and each

of six component laboratories. Half of his time is spent in the library keeping track of the incoming literature; the remainder of his time is spent in the laboratory talking to the scientists and engineers about what he has found and determining what they might be needing from the library. Although most libraries cannot afford this level of support, all libraries should carefully consider the value of assignment of literature search personnel to projects for part time.

Location Reduces Barriers

Near the library at General Electric TEMPO there was formerly an office which was periodically occupied by various scientists and engineers as they shifted assignments. The information-seeking-and-using behavior of these occupants changed rather dramatically during their few months spent there. Much more consideration should be given to architectural innovations that may accomplish such increased exposure of potential customers to the library and its librarians. Related to this concept is Germany's Quickborner Team which landscapes office layouts to follow lines of communication—rather than status—within a company (9).

Conclusion

The single—but vital message—of this paper is that the library revolves around the information needs and context of its customers. Many barriers beset that relationship, but some suggested ways to alleviate these obstacles have been described.

Where do you, the reader, fit into this picture? Each of you must assess this message as it fits your own library and your particular relationship with the customer. However, it is clear that tomorrow's managers will utilize new and more sophisticated skills during the next decade. This will result in new demands for faster and more effective responses from the information service. Our best single response to that challenge is to sensitize ourselves to the needs and requirements of our customers—and let that concept guide us within the library and in all of our relationships with others.

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Time Lag in the Flow of Scientific Information

A Case Study of Thomas Henry Huxley His Life and His Writings

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■ Using the life and writings of Thomas Henry Huxley—along with those of Darwin—as a case study, an attempt is made to identify the length of the “time lag”—and to elucidate its causes—between initial presentation in the literature of a factual discovery (with accompanying new theoretical concepts), and the scientific acceptance of the new information. The need for a conscious reaction to new and challenging developments is not restricted to the scientific community. Librarians must also expand their conscious responsibilities so that they can react to crucial social needs in less than the generation gap described in this paper.

WHILE, deservedly, much effort is going into mechanized information retrieval—resulting in ever faster techniques—we are, at the same time, in danger of overlooking past lessons of experience in the flow of scientific information, where *gross* time lags exist. It is a truism in the history of science that there exists a gap between the time when notice of a scientific discovery first appears in the literature and the time when that discovery finally gains general acceptance (18). *How much of this is due to natural caution and time for carefully controlled experiments? And how much to irrational reactions to the new? The problem is one of*

consciously emphasizing the humanistic and social lessons of the past for the benefit of a more aware consciousness in the present.

Of the actors in the drama, the names of some have become household words, while others, whose reputation once glittered, are today relegated to the limbo of long forgotten men. First and foremost there was Charles Darwin, who disproved the doctrine of the *fixity of species* and accumulated proof that during the course of ages the higher animals have been derived from the lower types by descent with modification. The man who—more than any other—did the most to spread Darwin’s teachings was Thomas Henry Huxley, exponent of adult education. Huxley was himself one of the pioneers in natural science. Few today know of Sir Richard Owen who, before Darwin, was England’s acknowledged authority on natural history. Owen with all the prestige and power at his disposal opposed the theory of evolution.

The time lag for the acceptance of Darwin’s propositions was not a function of slow communication and dissemination of his propositions. Opposition from the scientific establishment was accompanied by opposition from the religious establishment, especially in the person of Wilberforce, Bishop of Oxford.

What sort of man was Thomas Henry Huxley? Charles Darwin’s “bulldog” and yet not Darwin’s advocate; a science educator with an audience of thousands and yet not a condescending popularizer; a sceptical materialist and yet not far removed from being the leading humanist of his day?

Darwin's bulldog he was. Immediately after the *Origin of Species* came out in 1859 he wrote Darwin (1):

"I trust you will not allow yourself to be in any way disgusted or annoyed by the considerable abuse and misrepresentation which, unless I greatly mistake, is in store for you. Depend upon it you have earned the lasting gratitude of all thoughtful men. And as to the curs which will bark and yelp, you must recollect that some of your friends, at any rate, are endowed with an amount of combativeness which (though you have often and justly rebuked it) may stand you in good stead.

"I am sharpening up my claws and beak in readiness."

His wholehearted devotion to Darwin and his cause did not prevent Huxley from differing privately with Darwin on points he considered important or from pointing publicly to evidence which was damaging to the theory of evolution. Huxley often maintained that he did not wish to find himself an advocate of Darwin's views if by an advocate was meant one whose business it is to smooth over real difficulties and to persuade by artfulness where he cannot convince by way of fact. But Huxley's position emerges most clearly and authoritatively from his own lectures to workingmen and presentations to the jury of his scientific peers.

The essay, "On the Physical Basis of Life," is a typical example of Huxley's thinking and teachings and well repays a reading (2). He operated with a sceptical, materialistic philosophy towards the investigation of nature, while never forgetting that systematic materialism does not correspond to real entities. A fine distinction perhaps, but one which Huxley himself makes and which shows that he does not wish to overthrow the importance of human volition or destroy the beauty of life.

Some simple questions might be asked of the historical record as to the length and cause of "time lag" in the flow of scientific information.

The Pain of the Young vs. the Old

Both Darwin and Huxley, in their writings, exhibit a consciousness, indeed a pain-

ful consciousness of the world's first reaction to Darwin's theory of evolution; a theory which derived man's origin from the lower vertebrates from man's morphology. Because of the importance of the exact mechanism by which scientific advancement takes place and is acknowledged I desire to quote first at some length from Darwin's "Introduction" to his *The Descent of Man* (19).

"The nature of the following work will be best understood by a brief account of how it comes to be written. During many years I collected notes on the origin or descent of man, without any intention of publishing on the subject, but rather with the determination not to publish, as I thought that I should thus only add to the prejudices against my views. It seemed to me sufficient to indicate in the first edition of my *Origin of Species* [1859] that by this work 'light would be thrown on the origin of man and his history'; and this implies that man must be included with other organic beings in any general conclusion respecting his manner of appearance on this earth. Now the case wears a wholly different aspect . . . it is manifest that at least a large number of naturalists must admit that species are the modified descendants of other species; and this especially holds good with the younger and rising naturalists. The greater number accept the agency of natural selection: though some urge, whether with justice the future must decide, that I have over-rated its importance. Of the older and

The Cladoceran *Daphnia* (a "water flea")

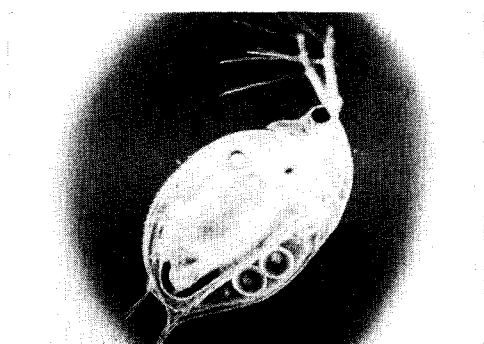


Photo Credit: From the 8mm. film loop, The Invertebrates, Thorne Films, Inc., Boulder, Colorado.

honored chiefs in natural science, many unfortunately are still opposed to evolution in every form [emphasis added]."

Now Darwin specifically points up an interesting fact. It is the younger generation of scientists, those who grew up with the theory of evolution, that admits "species are the modified descendants of other species" and that "natural selection" is the agency involved. Of the older (and honored) chiefs in natural science we are told that "many are still opposed to evolution in every form."

And this runs counter to the commonly accepted implicit belief, one might almost say to the "folklore" of layman and scientist alike: that the scientist has an open mind and will accept or reject a hypothesis solely on the basis of factual evidence. It would seem that Saul does not become Paul and that recognized, established authorities—in the main—were not converted to the discovery of a contemporary natural scientist, admittedly of a "revolutionary" nature. That a generation—some 20 to 30 years—passed before Darwin came into his own does not seem to be an isolated case (3).

The Irrational Is Always with Us

The next question to be asked of the historical record is why it took the scientific community this long? How much of this was due to natural caution, time for careful control experiments *inter alia*? How much was due to irrational reactions to the new? What form did these irrational objections take? For the crucial questions must be posed later, even as Huxley himself covertly did in the evening of his career: "Are these irrational reactions going on today?" If so, "How can we recognize them?"

Sir Richard Owen's name was synonymous with scientific prestige in English natural science in the era preceding *The Origin of Species*; and it is to Owen's theoretical disagreement with, and personal ill-feelings towards, Darwin and Huxley that we must turn (4). Owen, influenced by personal contact with Cuvier, the great paleontologist, at first lent the force of his personality and prestige to Darwin and Huxley. Owen reviewed the printer's proofs of Darwin's *Voyage of the Beagle* as a favor to the natu-

ralist; and he even went out of his way to help the young Huxley to win government support for his studies on board the "Rattlesnake."

In the years that followed Owen accumulated more honors and rose in professional and social esteem. He became intimately acquainted with Prince Albert and the Royal Family, with leaders of the political clubs, and with the more distinguished prelates of the Anglican Church. He won for himself the superintendency of the Natural History Department of the British Museum. As he rose in the "Establishment" the spirit of inquiry that marked his earlier days seems to have left him. More and more he stuck to classifying, compiling and refining old views.

As early as eight years before the two men came into conflict Huxley said of Owen that he did some very "ill-natured tricks" occasionally, though Owen had been very civil to him for which he was grateful. But Huxley still felt it necessary to be on his guard (5).

Darwin wrote to a friend that Owen "truckled to the approbation of those high in Church and State" (6). When Huxley began to display more and more of his typical brilliance, Owen was clearly disturbed; and when Huxley presumed to differ from Cuvier, Owen's model, the falling out was complete. Owen ever afterward exhibited a personal hatred towards Huxley.

It was the June 1860 Meeting of the British Association for the Advancement of Science at Oxford which dramatized Huxley's powers as a public speaker and defender of the Darwinian cause. Summarizing the oft-told tale MacLeod writes (7):

"Owen rose before Section D, announced that he wished to 'approach the subject [of evolution] in the spirit of the philosopher,' and declared in opposition to Mr. Darwin, that the brain of the gorilla 'presented more differences, as compared with the brain of man, than it did when compared with the brains of the very lowest and most problematical of the *Quadrumana*.' Huxley stood up, gave Owen a 'direct and unqualified contradiction,' and took his seat. The following Saturday, Bishop Wilberforce made his famous, or infamous, sneer at Huxley's

presumed ancestry, and met Huxley's searing rebuttal: 'He was not ashamed to have a monkey for his ancestor; but he would be ashamed to be connected with a man who used great gifts to obscure the truth.' "

Did Owen put Wilberforce up to it? We will probably never know for sure, though in retrospect it seems that it might have been likely. In any case, the element of personal slander may be seen.

the theological attacks by the orthodox; followed by efforts among the more liberal religious thinkers to mitigate and adapt the Darwinian theory to theological views (8).

When Darwin's *Origin of Species* came into the ken of the theological world, it was as if a plough had come into an ant-hill. Everywhere, those who felt themselves and their beliefs threatened swarmed forth—angry and confused—with sermons, articles, pamphlets and books directed at the new thinker.

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- 1859 Darwin publishes *Origin of Species*. Presentation of evidence that the species are not immutable and that a natural selection is the agency of change in wild animals and flowers corresponding to the selection exercised by man in the domestic breeds.
 - 1859 Huxley writes Darwin: ". . . considerable abuse and misrepresentation . . . is in store for you."
 - 1860 Sir Richard Owen, leader of "classical" British science, declares his opposition to Darwin and criticizes Darwin's handling of the anthropoid ape material.
 - 1863 Huxley publishes *Man's Place in Nature*. Answers Owen's criticisms and determines man's place in the animal kingdom by means of structural comparisons.
 - 1874 Darwin notes that his evidence on origin of species is accepted by the new generation of younger and rising naturalists although many older and honored chiefs in natural science remain opposed to evolution in every form.
 - 1894 Forty-five years after publication of *Origin of Species*, and 30 years after the publication of *Man's Place in Nature* evolution is widely accepted, but Huxley says that young pioneer natural scientists will still meet the same opposition Darwin and he did.
-

Opposition: Both Scientific and Theological

We have examined, to some extent, the reasons centering around scientific prestige, which brought opposition from Sir Richard. Perhaps even more important to ascertain are the principles of scientific understanding which formed the intellectual battlefield. These principles will be dealt with when discussing Huxley's critique of Owen in *Man's Place in Nature* (11).

Of course, the opposition to Darwin and evolution was not all on the scientific ground—far from it. Today we even tend to forget that aspect and to remember only the theological tempest. Bitterness, hostility and outright persecution marked the beginning of

The keynote was struck at once in the *Quarterly Review* by Wilberforce, Bishop of Oxford (9). He declared that Darwin was guilty of "a tendency to limit God's glory in creation"; and that "the principle of natural selection is absolutely incompatible with the word of God." The general tenor of the shock was well expressed by one theological authority (10) who asserted: "If the Darwinian theory is true, Genesis is a lie, the whole framework of the book of life falls to pieces and the revelation of God to man, as we Christians know it, is a delusion and a snare."

After Lyell came over to Darwin's viewpoint "Dogmatic Theology" gave way, gradually, to "Religion pure and undefiled"

(White). Science had won another round in its fight to have its discoveries tested by its own methodology.

In 1854 Huxley had been appointed lecturer on natural history at the Royal School of Mines. He first set to work to educate himself in every discipline of biology and to acquaint himself "at first hand, with the evidence for and against the extant solutions of the greater problems of that science" including the burning question of the position of the human species in zoological classification. Even among men of science opinions lay poles asunder. The famous geologist, Lyell, at this date, though regarded by many as a revolutionary, was strongly opposed to anything which tended to break down the barrier between man and animals.

In 1857 Huxley heard Owen expound the doctrine that certain anatomical features of the brain were "peculiar to the genus *Homo*" and separated that genus from all other mammals, placing him in a division apart from and superior to all the rest. Huxley started his own study of the matter and found that the structures in question were not peculiar to man, but were shared by him with all the higher apes.

In 1859 after *The Origin of Species* appeared Huxley made his own structural relations of apes and men. He discussed conclusively the two subjects: development and vertebrate anatomy (11).

In 1860 Huxley took "The Relation of Man to the Lower Animals" for the subject of a series of lectures to working men, culminating in two lectures on the topic at Edinburgh in the early part of 1862. The substance of these two Edinburgh lectures appears as Part 2 in *Man's Place in Nature* (11), the first lecture describing the general nature of the process of development among the vertebrate animals, and the modifications of the skeleton in mammals; the second dealing with crucial points of comparison between the higher apes and man, that is the hand, foot and brain (12).

The result of Huxley's anatomical comparisons is constant (13): "Whatever part of the animal fabric—whatever series of muscles, whatever viscera might be selected for comparison—the result would be the same—the lower Apes and the Gorilla would differ more than the Gorilla and the Man."

And Huxley had done his anatomical work well. Not only had he lectured to popular audiences on the subject; he had, between 1860 and 1863, set to work to make good his promise of meeting the scientific opposition and of demonstrating the existence in the simian brain of various structures alleged by Owen to be exclusively human. The opponents of Darwin found it hard to accept a belief in the gradual evolution of man from some lower form and had seized upon Owen's evidence which seemed to establish a broad gap between the structure of man and that of other animals.

A Hypothesis Discredited

To place Owen's difference with Darwin in its larger setting, we must understand (even if we do not, at this late date, agree with) Owen's concept of a "morphological type," which he explains when he interprets *homology* (14) "as signifying that essential character of a part which belongs to it in its relation to a predetermined pattern, answering to the 'idea' of the archetypal world in the Platonic cosmogony, which archetype or primal pattern is the basis supporting all the modifications of such part . . . in all animals possessing it."

Can we "abstract" from this theory the quality of being *perfect* in accordance with an *ideal*? There are indications that at least once before in the history of science this ideal of Nature being *perfect* has stood in the way of understanding the actual living, moving situation. For example, even Copernicus, who introduced the heliocentric theory in astronomy, took over from Ptolemy the erroneous idea of the planets revolving in perfect circles.

Owen specifically claimed that the human brain was distinguished from that of all other animals by the backward projection of the cerebral hemispheres, so as to cover the cerebellum, and by the backward prolongation of the cavity of each cerebral hemisphere into a "posterior horn," with an associated "hippocampus minor." In *Man's Place in Nature*, Huxley clearly showed that Owen's statements were inaccurate and inconsistent with well known facts, and that indeed man is one of the primates.

Even today, Huxley's pattern in expounding evolution is followed in anatomy textbooks, with structural series of hands, feet, skulls, brains, jaws and teeth being presented for comparative purposes.

Is Elapsed Time a Component of Truth?

Huxley did not emerge unscathed. We can see the hurt beneath the ironic tone: "The Boreas of criticism blew his hardest blasts of misrepresentation and ridicule for some years [after the publication in 1863 of *Man's Place in Nature*]; and I was even as one of the wicked." (15) "Magna est veritas et praevalebit!" "Truth is great, certainly, but, considering her greatness, it is curious what a long time she is apt to take about prevailing." (16) Huxley was lucky and hardy; he saw within his own lifetime his scientific work enclosed as "the foundations of later knowledge."

The fight had made him a shrewd observer of mankind. And now we come to the time when we will want to turn to the advice Huxley gave to pose a crucial question—a question crucial to 1969, dryly labelled the flow of scientific information. Is a "time lag" a novelty of the 20th century? Or is it also a matter of real historical concern?

What did Huxley—in the twilight hours of his hard-fought career—muse (17), now that evolution had all but become an established fact?

"To my observation, human nature has not sensibly changed during the last thirty years. I doubt not that there are truths as plainly obvious and as generally denied, as those contained in *Man's Place in Nature*, now awaiting enunciation. If there is a young man of the present generation, who has taken as much trouble as I did to assure himself that they are truths,

A Day-Old Infant Baboon Nestles in His Mother's Arms.

The mother grooms the infant almost continuously, anticipating the importance of peaceful grooming in baboon social relations.

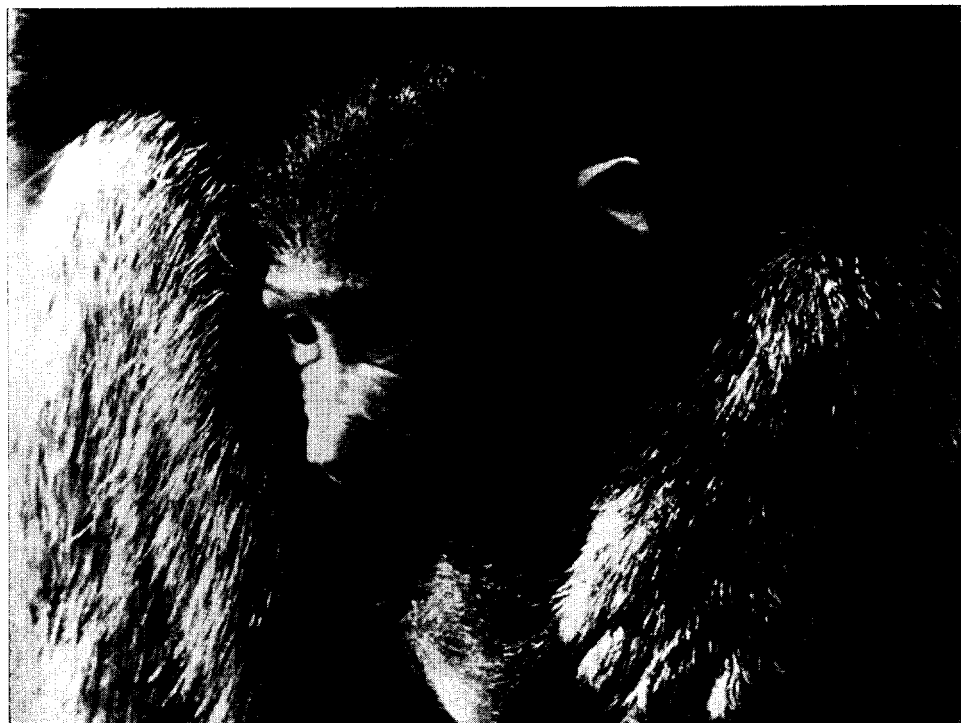


Photo Credit: Dr. Irvén DeVore, Harvard University. The scene is from the 16mm. film series, *The Young Infant*. Universal Education and Visual Arts, N. Y.

let him come out with them, without troubling his head about the barking of the dogs of St. Ernulphus. 'Veritas praevalebit'—some day; and, even if she does not prevail in his time, he himself will be all the better and the wiser for having tried to help her. And let him recollect that such great reward is full payment for all his labour and pains."

Perhaps science does not develop solely by the accumulation of individual discoveries and inventions but, sometimes, moves ahead by means of a new and challenging theory outside the known realm. Each librarian must also learn to react consciously to his own insights-for-truth that, by definition, can reside only in that which is common to all. We can all become better defenders of the "right to read" and more firm opponents of censorship when our frame of reference expands to include the firm convictions of the pioneer natural scientist.

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Received for review December 26, 1968. Accepted March 27, 1969. Julian A. Grossman is government documents librarian at Muhlenberg College. Mr. Grossman's undergraduate studies in anthropology and his graduate work in the history of science—in addition to his MLS—provide the basis for his interest in this historical example of the time lag in the flow of scientific information.

One Library in Two Hemispheres

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DURING the last five years Tucson, Arizona and its environs have evolved as the astronomical workshop of the Western Hemisphere. A center unique in the astronomical world has been established because of the number and variety of telescopes. Bridging the communications gap between the observational data or photographic plates and scientific theory are the libraries, which back up the astronomers' work at the telescopes, at the computers or out in space. Facts from books and charts, maps and mathematical tables are working tools that supplement the fine instruments.

The University of Arizona Science Library has the largest and oldest collection in Tucson. Its collection includes the biological sciences and the earth sciences as well as astronomy and physics. On its shelves are approximately 180,000 volumes. Its astronomy division was originally part of the collection of the Steward Observatory. Today, Steward has only its Parker Room with 750 books, plus atlases and reports, and a chart room; about 50 current astronomy journals are received.

The library of the University's Lunar and Planetary Laboratory is called a research and working library with about 2,000 volumes on astronomy (and its related fields), geology and optics; about 60 current journals are received. A small optics library is being collected which will later be expanded in the new Optical Science Building on the UA campus.

Kitt Peak National Observatory

Books, charts, maps and mathematical tables are the basic requirements of an astronomer. The library of Kitt Peak National Ob-



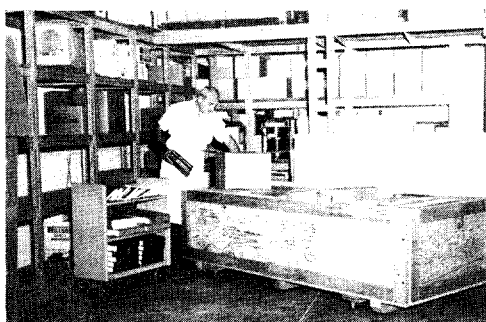
Stars and Gaseous Nebula in the Milky Way as Seen at the Cerro Tololo Observatory. The Milky Way is observed most clearly from the Southern Hemisphere; our sun is a star somewhere in the middle of this galaxy.

servatory is rapidly becoming one of the largest astronomical libraries in the United States with more than 23,000 volumes. This collection is in almost constant circulation through its four branches—two of which are in central Chile.

The central library of KPNO is in Tucson. Its "neighborhood" branch is close to the telescopes on Kitt Peak in the Quinlan Mountains (65 miles west of Tucson). The collections of the two branches in the Southern Hemisphere in Chile—at La Serena and Cerro Tololo—are all acquired and processed by the Tucson staff. The observatory site (Cerro Tololo) is an isolated spot noted for its excellent weather, its clear air of the Andes, and its rugged scenery.

I'll Take the High Road Before Ye

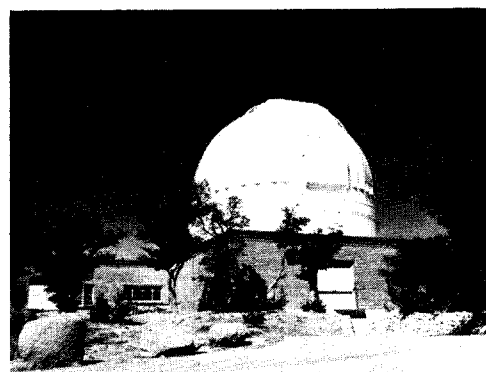
The main library in Tucson is open 24 hours a day, seven days a week; but it is open to the public only between 8 a.m. and 5 p.m. Grace Foley, chief librarian, is now assisted by three full-time librarians and a



An Intra-Library Shipment Is Prepared at Kitt Peak Headquarters in Tucson. Custom-made, waterproof containers are shipped to New Orleans. After six weeks at sea the containers are trucked to the library branches at La Serena and Cerro Tololo.



Books and Supplies are Carried by Truck from Tucson to the Quinlan Mountain Site.



The Library Building on Kitt Peak Houses Offices and a Radio-Controlled Telescope.

student assistant, Dr. Helmut A. Abt, a stellar astronomer on Kitt Peak and a member of the University of Arizona faculty, has administrative responsibility for the library. Miss Foley and Dr. Abt began the central library collection for Kitt Peak in 1959 before either the road to the mountain or the building in Tucson had been completed. The first fifty books selected were—not surprisingly—on surveying.

No attempt has yet been made to build a historical collection of rare books, but ten private collections including the personal library of Dr. Otto Struve and the Norman Lockyer Collection of England have been acquired.* Private gifts have also led to welcome additions to the library's collection.

With a yearly budget of \$25,000 from the National Science Foundation it has been possible to acquire the classics in astronomy and related fields. The present collection is now:

General Science	13.1%
Mathematics	4.4
Astronomy	42.0
Physics	17.8
Geophysics and Geochemistry	7.8
Engineering	14.8

In the total collection of 23,300 volumes 16,400 volumes are at Tucson, 2,200 at Kitt Peak, 2,700 at La Serena, and 1,000 at Cerro Tololo.

In the city of Tucson KPNO has three divisions: stellar, solar and planetary sciences. There is no need for books on solar or planetary problems in Chile, because these research activities are conducted in the United States at present. More than 300 periodical titles are received. Almost all new periodicals, however, are ordered in duplicate; the second copy is immediately shipped by air to La Serena.

About 30% of the incoming mail to

* Dr. Otto Struve died in 1963 after playing a prominent part in modern astronomy; he is considered to be responsible for the development of radio astronomy in the USA. A member of an illustrious family, all of whom were world famous astronomers, he was director of the Yerkes Observatory (University of Chicago). Dr. Struve played a major role in founding the McDonald Observatory in Texas,

KPNO is addressed to the library. In addition to the complex mixture of outgoing mail common to all libraries, there are shipments by truck to the Quinlan Mountain site plus shipments for dispatch by boat to Chile.

When a librarian is not on duty, an honor system in charging out materials is in effect. Only twenty books are held in "Reserve." Five copies of each of the outstanding journals pertinent to astronomy and optics are always on reserve.

Recreational Reading for the Night People

In the working library on Kitt Peak along with reference works and charts there are shelves of books about the Southwest and a section of popular novels for recreational reading. If a reference book is "lost" (it may have been carried to the observing platform), a new one from the city is sent up immediately.

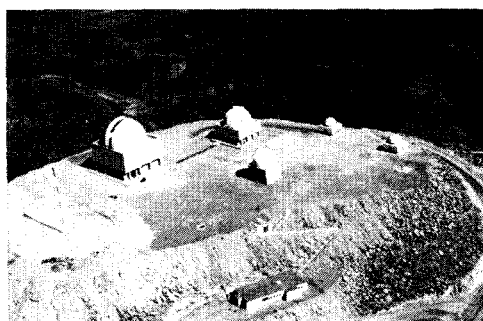
The Chilean libraries have duplicate copies of reference works and journals plus a small collection in Spanish. Some texts are wholly devoted to astronomy in the Southern Hemisphere with its superb view of the Milky Way.

Reprints of scientific articles written by affiliated or visiting scientists are an integral part of KPNO's library services. These reprints with their distinctive terra cotta pink covers are titled *Contributions*. More than 370 KPNO *Contributions* have been issued to date. Copies of the *Contributions* are available to other astronomical libraries as a service of KPNO.

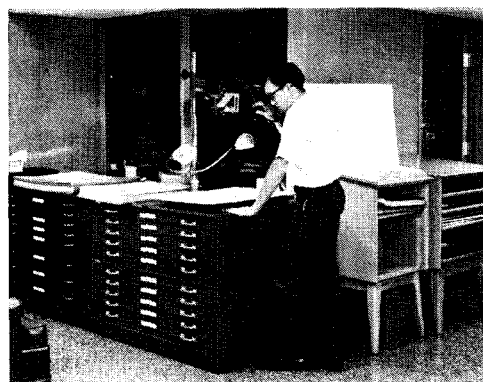
Because the construction of telescopes is Kitt Peak's foremost task, the library is noted for its collection directly related to site survey and design problems. Subjects range from seismology to reinforced concrete. Included are books for the machine shop, electronics and computer divisions, optics laboratory and photography department.

and in 1952/1955 he was president of the International Astronomical Union.

Norman Lockyer was a British astronomer who founded the Norman Lockyer Observatory which retained his name after his death. Several years ago the observatory in England (outside of London) abandoned its astronomical research for geophysics. The astronomical portion of the library was purchased by KPNO.



The Observatory Area at Cerro Tololo in Central Chile.



Library Services in Tucson Include the Photographic Recording of Sky Map Locations in the Library at Kitt Peak Headquarters. Astronomers need sky maps to locate observing positions to be used at the telescopes.



Received for review August 9, 1968. Accepted for publication February 13, 1969. Mrs. Cardon is a free-lance writer whose interests in contemporary subjects range from astronomy and "the blues" to hippies and art. She has been a member of the Arizona Daily Star staff. (Photo credits: Kitt Peak National Observatory)

An Automated Library System Proposal

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■ A system is described in which completely automated control of the circulation of a library may be obtained. The means of entering incoming books and documents into the system are detailed according to several alternate plans of operation. Charge-out and charge-in techniques for MICR (Magnetic Ink Character Reader), OCR (Optical Char-

acter Recognition) or magnetic code reading equipment are described. Flow charts of programs appropriate to a generalized system are included as baseline reference data. This system is one which has *not* been placed in operation; it is presented for discussion and possible implementation.

IT IS a degradation to a human being to chain him to an oar and use him as a source of power; but it is an equal degradation to assign him a purely repetitive task in a factory which demands less than a millionth of his brain capacity."

—Norbert Wiener

The quotation from one of the great men of automation can be applied equally to any number of non-factory operations. Many duties of librarians are better and more efficiently performed by machines. There is little doubt that improved operations have been realized through automation of certain parts of the librarians' tasks but these have been, in the main, piecemeal. The use of microfilm techniques at the charge-out station, for example, has improved operations at that location; but this technique has done little or nothing to relieve the massive manual searching required to maintain in a current status the records of a large library. Li-

brary items which have been kept by clients past their due date still have to be identified by a manual search of the charge-out film. Delinquent notices still have to be prepared by hand. Lists of clients who have violated the rules by retaining books beyond their due date, or who are repeated and habitual violators, are seldom prepared and maintained. When such lists are prepared, they are prepared by hand and require time and effort which could be more profitably applied elsewhere. It is true that a handful of libraries have converted to automated systems. For example, the Los Angeles Public Library did so a few years ago. During the first year of operation the number of delinquent accounts the system detected and caused to be collected was high enough to warrant a news item which received national release by a wire service.

This paper presents a collation of several alternate methods for each step in the book and document circulation control process.

Each method described has its own merits. A system can be assembled which should meet the requirements of almost any library or document control system having *sufficient traffic density to warrant automation*.

Overall System Description

A library system is divisible into three subsystems.

1. Acquisition; classification, recording.
2. Charge-out; circulation.
3. Return control; follow-up.

Each of the three subsystems has subordinate operations. It is within the subordinate operations that the alternatives occur. The interfaces between the subsystems are determined by the choice of operating mechanisms. During the Acquisition phase, the following operations are usually performed:

- Acquisition
 - Check-off against invoice
 - Deliver to classifying personnel
- Assign Accession Identification
 - Use any convenient numerical coding system
 - Select proper ID Code
 - Affix selected ID to book/document/etc.
- Prepare Accession/Classification Record
- Release to Circulation

The next series of operations, which for convenience are called accession and circulation, may be shown as:

- Identify the book or document with its accession number.
- Prepare File Card(s)
 - Summarize
 - Abstract
 - Key words
- Circulation
 - Assign volume/document to the circulation shelves
- Using MICR, OCR, Magnetic Code Reader or the like, record
 - Charge-out
 - Return of volumes/documents

During the Accession and Circulation stage, some indispensable operations must be retained. However, the initial departures from the old systems are evident.

Acquisition. This is unchanged. Books/Documents are received into the system by checking against invoices, bills, shipping orders, etc. The item is then delivered to those responsible for classifying, coding, etc.

Assign Accession Number. The number assigned will depend upon the classification system used. If the Dewey Decimal system is used, the number should be expanded so that each volume or document has a *unique number* to identify it. This is accomplished by adding -1, -2; or A, B, etc. to the basic number. Thus, within each system, no two items share completely a common number. Through this number, control may be exercised over each individual item in the library. Its location or state of circulation (in library, retired, etc.) can be ascertained.

The type of impression to be used on each of the items in the library will be a function of the hardware to be used at the charge-out counter. The location of the imprint/recording, however, is recommended to be the upper right hand corner of the front cover of the book/document. The reason for this is explained in the discussion of the various charge-out hardware alternatives. (It may be possible to arrange with the publishers to bind all books and documents intended for library use with a white rectangle in a designated corner.)

Prepare Accession/Classification Record. In this step the differences between the traditional and automated library system first become apparent. Instead of the index card, individual book/document record card, and any other records required by the ground rules of the library, a single record will be made. This record will contain all pertinent information required by the local library and each record will be for a unique accession number. A computer program will extract from these records the details required for:

- a) The index cards (if a time-sharing system is used, this item may be eliminated by use of cathode ray tube interrogation consoles),
- b) Library accession list,
- c) Item status list, and
- d) Any other records required.

Each of these will be printed from the master record tape, to which changes are entered periodically. This can be daily, weekly,

monthly or at any convenient interval, depending only upon the needs of the library using the system. The record may contain the following information as an example; or a master record format can be designed to meet the needs of any particular library.

MASTER FILE RECORD.

1. Accession Number
2. Classification Number
 - Fiction
 - Non-Fiction
 - Art
 - Bibliography
 - Calligraphy
 - etc.
3. Author
4. Title
5. File Number (This may be the class number plus volume ID number or copy ID number, if more than 1 copy is stocked)
6. Publisher
7. Publication date (original)
- 7.1 Revised edition date
8. Cost (dollars or other monetary unit)
9. Circulation status (out, in, retired, in repair, etc.)
10. Additional data per needs of user library
- ...
- XX. *Precis of book/document.*

MASTER FILE REPORT. From the data recorded in the Master File Record, a Report Generator program will extract those items of information pertinent to various library functions and, after re-arranging in a convenient order, either alphabetically, numerically or a combination of both, prepare a tabulated listing for the use of the library staff in their normal duties. Sample program flowcharts are in Figures 1 and 2.

No further preparation of accession records is necessary. The book/document can be immediately placed on the shelf for circulation.

Charge-out. The procedure is the same as is now prevalent. The client brings his book(s) or document(s) to the charge-out desk. However, the means of charging out will be speeded up. Three possible alternatives are described below. "State-of-the-art"

is changing so rapidly that other, more efficient means may already be available. These are cited only as examples.

1. MICR. Use of Magnetic Ink Character Reader system implies the use of specially prepared individual ID cards for library clients, and books and/or documents with magnetic ink imprints.
 - 1.1 All library cards now in use will have to be converted to new ones having the client's ID number and/or name and other identifying marks imprinted in magnetic ink.
 - 1.2 Books will have their identifying catalog numbers imprinted in magnetic ink in a fixed location, such as previously suggested; for example, the top right-hand corner of the cover.
 - 1.3 At the charge-out desk, the client's card and the book identity are recorded by the MICR on magnetic tape. The beginning of each day's transactions is identified on the tape so that each day's transactions and the due date of each book will be known.
 - 1.4 Each day's transactions can be processed during the low traffic hours from 8 p.m. to 8 a.m. during which time, machine costs are at a minimum. It may be possible to process transactions weekly or semi-monthly. Processing costs are reduced considerably if low traffic hours and batch processing methods are used.
 - 1.5 Upon return of each book, or document, the item is recorded by itself, without the client's card. This can be an automatic process in which the client simply places the book in a chute. A conveyor belt can carry the book past the MICR and into a rack from which the book can be placed on the shelf for recirculation. In the event that a client does not place a book in the chute in its proper relation to the MICR, an automatic servo-orientor can be added which will turn and/or flip the book into its proper position. Books having no MICR ID will be diverted to a special rack for individual handling; in this way, books from other libraries can be detected and separated automatically.

1.6 The magnetic tape of the charge-in desk will be played against the master tape of books in circulation. A book returned within the system time limit will have its record erased from the master charge-out tape. During each processing period, records of only those books actually still in circulation will remain on the tape. Thus, a weekly or semi-monthly printout of the tape(s) can list all books in circulation or only those overdue. Items returned after their due date are flagged and the client notified of the amount of his fine (if a system of fines is in operation). The client's ID will be listed with the overdue books. An automated printout program can cause overdue notices to be printed automatically and mailed to the client as a reminder. If a real-time computer is used, the program can be designed to detect delinquent clients at the check-out counter and stop further use of library facilities until the delinquency has been corrected. A system in which a real-time computer is not used can have a moderately priced comparator at the charge-out station. Each charge-out transaction ID will be compared with the ID's of persistent delinquents via the stored data and comparator. Instant detection at the charge-out station is possible.

2. OCR. If an Optical Character Recognition system is to be used, the same procedure outlined for MICR, above, may be followed. The only difference will be in the equipment used, the cards issued to the library's clients and the imprint on the book itself.

3. MAGNETIC CODE READER. The procedure will be the same as for MICR and OCR, above, but cards, much like the present "key cards" used to admit authorized individuals to magnetically latched rooms, will be used. Each card must bear the unique code of its owner. Likewise, the books/documents owned by the library will have to be identified with a magnetically coded strip in a fixed location.

4. COMBINATION. A fourth possibility, punched cards for book charge-out combined with one of the preceding three systems, was considered but discarded because

the manual operations involved in placing the cards into the reader, stacking the cards after charge-out, re-inserting the cards in the book pocket and other handling required would result in a system having little, if any, advantage over the existing systems.

Record Processing

Record processing begins with the original receipt of the book or document at the library. A form must be designed which will meet the special requirements of the individual library. An 80-column keypunch form is used as a basis for the format in order to facilitate record processing. This phase of the operation will require keypunch service. Suggested fields for the keypunch format are:

Field 1. Columns 1 and 2 of all cards in a record are reserved for the card number: (1 through 20).

Field 2. Columns 3 through 7 of all cards in a record are reserved for the accession number of the book or document. This number can be either the specific call number of the item entered in the record, or it can be an arbitrary "housekeeping" number for internal record control. If the call number of the book or document is used here, Field 6 on Card No. 5 may be left vacant.

Field 3. Columns 18 through 23 on Card No. 1 will have the classification code of the book/document entered. This classification code will identify the item as: Fiction, Biography, History, Periodical, Newspaper, etc. If a classification system is used in either Field 2 or Field 6, Field 3 may be left vacant.

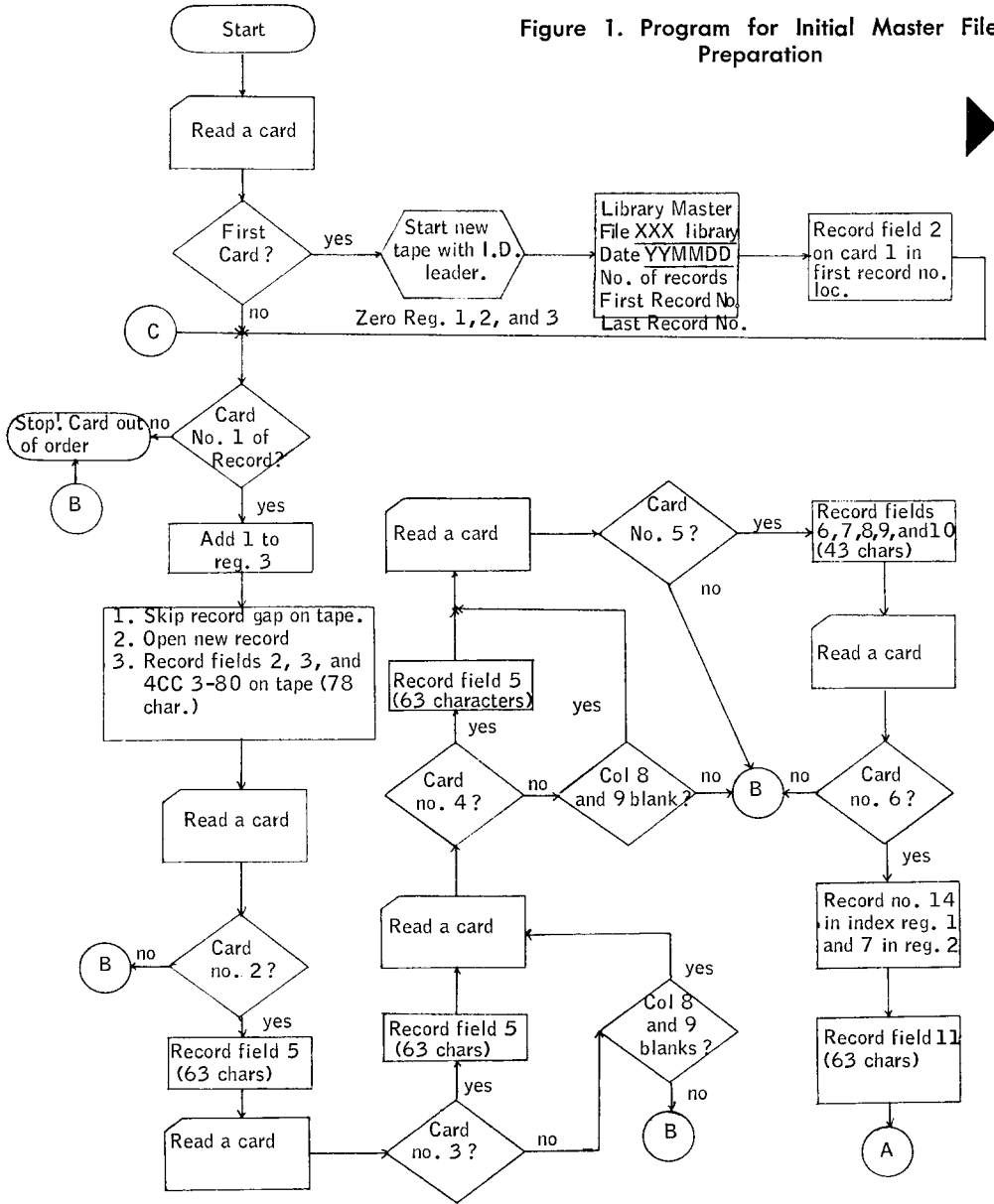
Field 4. Columns 24 through 80 on Card No. 1 contains the author's or editor's name(s). The 57 characters in this field should be enough for the longest name. However, should this field be inadequate to contain the total name(s) of the author (or authors), the programs for recording and updating information in the files and for extracting data from the file can be written to include an extension card. A simple device of placing an "A" in Column 1 of the card, preceding the card number can be used to extend this field to include Column 18 through 80 of an extension card, adding 63 characters for a total of 120 characters.

Field 5. Columns 18 through 80 of Card Nos. 2, 3, and 4 are used to record the title. This provides a total of 189 characters. Should this prove inadequate space for any title, the same device used for Field 4 can be used to extend this field for "N" cards. N is interpreted as any number up to 78 cards; that is (A to Z) X 3.

Field 6. Columns 18 through 32 on Card No. 5 are used to record the file number (Dewey Decimal) of the book/document. These 15

characters permit the use of an extension of the Dewey Decimal System to include unique identification of each volume. If this number is selected as the number to be entered in Field 2, Field 6 may be left blank. This field has been included in this presentation in order to illustrate how to exercise an option to use this system to best advantage.

Field 7. Columns 33 through 42 of Card No. 5 will have the publisher's identity. A standard list of a 10-character (maximum) acronyms



would be developed for this entry. Simon and Schuster, for example, would require 16 characters if spelled out completely. An acronym, such as SIM SCHUS, uses only 9 characters and the Master Report Generator program can be written to translate this back into the full names when a printout is required.

Field 8. Columns 43 through 48 on Card No. 5 have the publication date entered. This entry is numerical and takes the form YYMMDD. The first 2 digits represent the last two digits of the year (1967=67). The second two digits represent the month (01 through 12 for January through December). The last two digits represent the day of the month (01 through

31 maximum). February 28, 1967, for example, would appear as 670228.

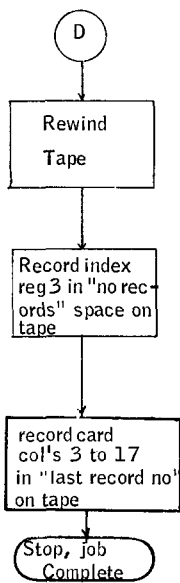
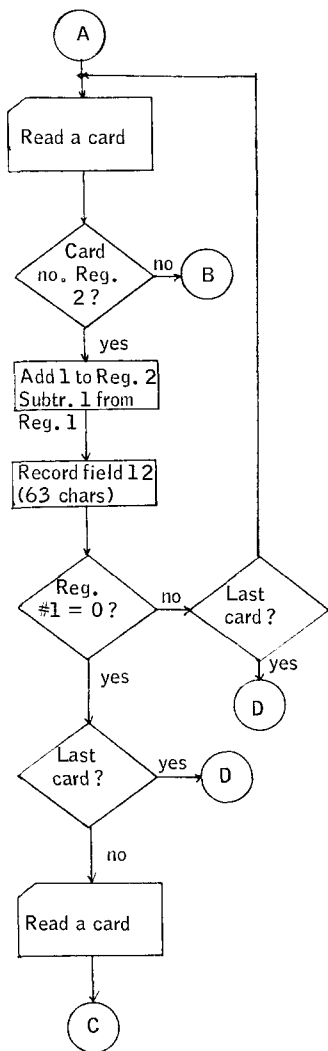
Field 9. Columns 49 through 54 on Card No. 5 have the date of the revised edition entered. This will be a six-digit number in the same format as that for Field 8 described above.

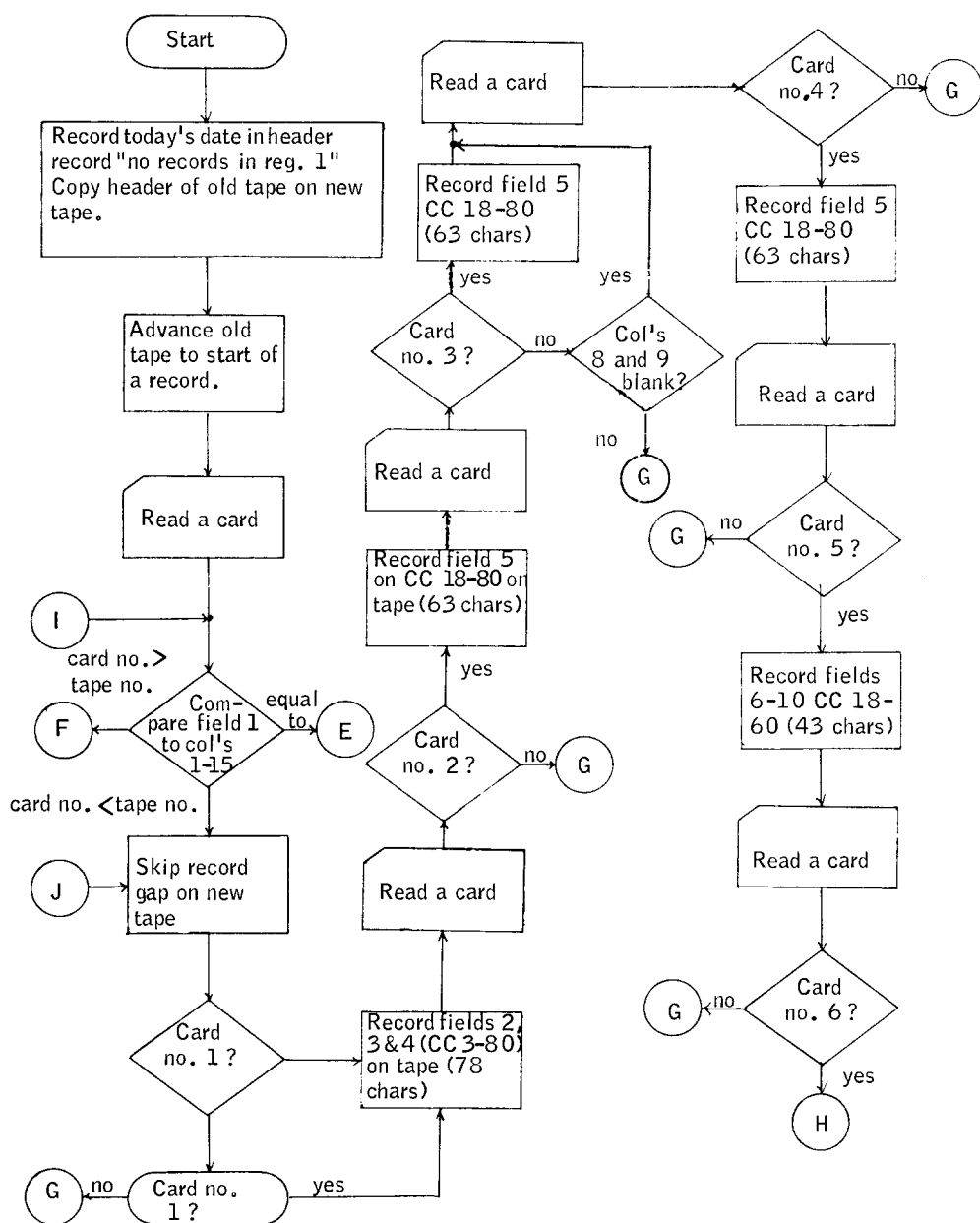
Field 10. Columns 55 through 70 on Card No. 5 have the unit cost of the item. Dollars and cents are entered in Columns 55 through 60. A decimal point in Column 58 separates the dollars and cents. Further space has been allowed for monetary systems requiring more digits than that of the U.S. system.

Field 11. Card No. 6, columns 18 through 80, is reserved for inserting the status of the item. Status is defined as follows:

- On shelf
- Circulating; due date; ID of borrower
- On reserve shelf
- In stacks
- Out for repair
- In circulation; Overdue; Due date; ID of delinquent borrower
- Branch library ID
- Lost, etc.

The master circulation program will insert circulation status in this field automatically. Additional status items can be added to the above list as needed. Special status items such



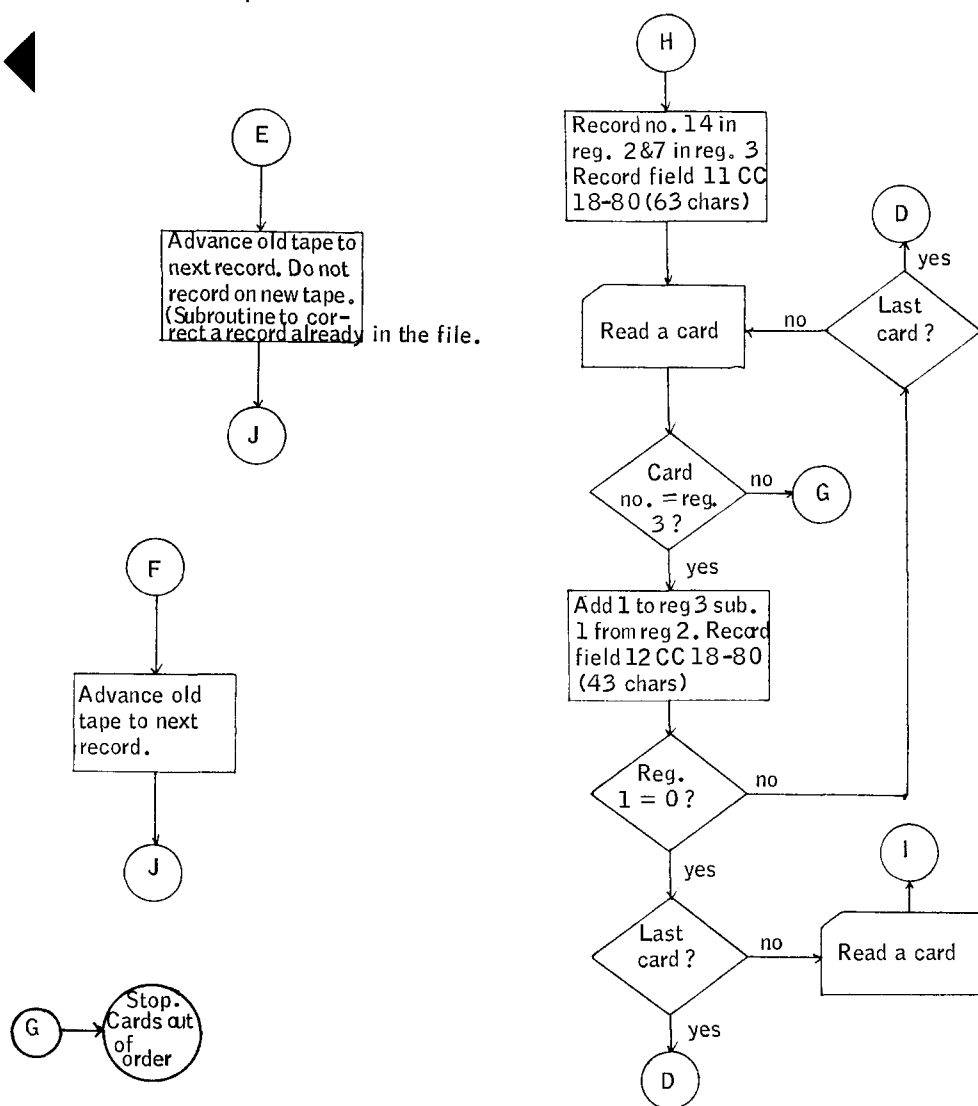


as "out for repair," "lost," etc. will always be entered via punched cards. Branch and mobile library identifications are also possible items of status. This card plus book/document ID can be used as a separate "quick reference" status file.

Field 12. Columns 18 through 80 on Card Nos. 7 through 15 are reserved for the key words

used on the index card for subject matter. Then will come the complete summary of the book. Through this part of the record, index cards can be printed automatically. If "real time" look-up equipment is incorporated into the system, this portion of the record, along with selected portions of the record, can be displayed on a cathode ray tube screen upon demand.

Figure 2. Program to Update the Master File Tape



Initial Master File Preparation

Prepare a "Library Record Encoding Sheet" for each item to be included in the circulating system. This includes items which are reference, or non-circulating, at the discretion of the librarian who determines the ground rules for the agency.

It is probably most economical to arrange the punched cards in Master File order before recording them on magnetic tape. Ac-

cession number order is recommended, but any other order can be used. The sequence depends upon the "ground rules" of the library; for the purpose of this paper, accession number order is assumed as that chosen for the system. The basic rules will not change if another order is selected. The only change will be the order in which the rules are applied.

The cards are recorded on tape in the flow-chart sequence of Figure 1. The tape record format is in Table 1.

Table 1. Tape Record Format

Field	Characters	Contents
* 1	1 - 15	Accession Number/Call Number
* 2	16 - 21	Document Classification Code
3	22 - 78	Author's Name
4	79 - 267	Document Title
* 5	268 - 282	File Number; if same as Field 1, need not be used
6	283 - 292	Publisher's ID (Abbreviated if necessary)
7	293 - 298	Publication Date (YYMMDD)
8	299 - 304	Revision or Reprinting Date (YYMMDD)
9	305 - 310	Cost (in dollars or other monetary units)
*10	311 - 373	Status of Document (On Shelf, In Circulation, In Repair, Retired, Lost, Stolen, etc.)
11	374-1256	Key words, Summary of Contents, Miscellaneous Information

* Items to be used in the "quick reference" circulation status file.

Master File Tape Update Program

The update cards are prepared exactly as for the original file. Cards are collated in accession number order before submission to the computer for entry on the Master File Tape. A merge program will search the tape for proper location and insert the new items into the proper location to insure that the assigned sequence is not interrupted (Figure 2). It is usually prudent to keep copies of the "History" tape as well as the new revised Master File Tape in order to insure that an accident does not destroy accumulated data.

Summary

The entire system is a streamlined operation which requires a minimum of manual operation. After the books, periodicals, newspapers, etc. have been placed in the circulation system, clients select the items they wish to borrow. These items, along with the identification card are presented at the charge-out station. The station may be manned, or self-operated, depending upon the sophistication of the clientele.

The item(s) to be borrowed along with the borrowers' ID card are placed in the charge-out reader. The borrower then departs with his selection. The tape recording is processed, either as previously described during low traffic hours with batch processing techniques, or, if an on-line or time shared computer is used, the data are recorded instantaneously and a check made to determine the borrower's "credit" status. Items being returned are deposited in a slot for return processing and restoration to circulation.

The processing will consist not only of the simple recording of a transaction, but the production of those reports necessary to the efficient operation of the library. Use of such a system as described in this paper gives the librarian a tool which can be used to both lighten the burden of repetitive and boring routine and speed up circulation to get maximum benefit for dollars invested in books and periodicals. Librarians, using such a system, can obtain reports and statistics which have been unattainable within a reasonably effective time frame. Information may be obtained on a useful timely basis instead of "after the fact."

Paper received for review June 17, 1968. Accepted December 11, 1968. Presented at a joint meeting of the Documentation and Aerospace Divisions, 59th Annual Conference, SLA, Los Angeles, June 6, 1968. Mr. Cook is Consultant, Data Systems in General Electric's Apollo Systems Department.



Reclassification from Dewey Decimal to LC in Subject Blocks

Betty Roberts

Science Library, Washington State University, Pullman, Washington 99163

IN 1964 when Washington State University Library decided to change to the Library of Congress classification scheme, the policy was to minimize recataloging; however pressures from some departmental libraries were strong, and the following reclassification procedure was developed with these objectives in mind:

- To reclassify the departmental collection as rapidly as possible;
- To keep the books out of circulation for as short a period as possible;
- To keep the bibliographic information in the catalog;
- To use a minimum of time of a professional librarian; and
- To utilize student help to a maximum.

A student who had worked in the library a number of years was selected to supervise the project; and less experienced students worked for her. The routines were kept simple, so this project was able to absorb extra students regularly assigned to other jobs when they had a slack hour or two. The routines were:

1. The student supervisor pulled 20 consecutive shelf list cards at one time and placed an inclusive temporary card in the shelf list. She then searched the *National Union Catalog: Author List* for the identical item. The class number assigned by the Library of Congress was written in pencil on the back of the shelf list card. This number was checked against the shelf list. If the exact item was not found, or there was no LC number, or LC classed an item as a series that we had classed as a monograph, the shelf list card and item were routed to a cataloger to assign a

number. Shelf list cards for items that involved the serial record were also routed to the cataloger.

2. Student supervisor determined how many self-adhesive labels needed to be typed with LC call number and wrote this number in pencil in lower right corner of the shelf list (one label for each card in the various catalogs, book pocket and book card, and one larger self-adhesive label for the spine).

3. Student brought in from the shelf the 20 books involved, attached a new label to the spine, book card and book pocket. Books in circulation were tagged and "snags" made for missing books.

4. Student supervisor crossed out Dewey call number on the author card and noted "Over." On reverse side of the card, LC call number was noted so reference librarians and patrons could find the book on the shelf in the period before the cards were corrected.

5. Student revisor checked newly marked books and returned them to the shelf.

6. Student took the shelf list card and labels to the various catalogs and affixed the label with new LC number over the old Dewey number. *The cards were not removed from the catalog.* Uniquely marked guide cards were placed in front of these cards. The regular revisors of the catalog were instructed not to remove these guide cards.

7. Student revisor took the shelf list card which did not yet have the label affixed, but which had the last label clipped to it so that both the Dewey and the LC numbers could be seen. He checked each card to be sure that the label with new call

number was affixed to the correct card. Cards were easily found because of the uniquely marked guide cards which were readily seen.

8. Student revisor affixed final label on shelf list card and refiled it.

The following is an approximate breakdown of the hours to reclassify and recatalog 675 monographs:

Cataloger	16 hours
Student revisor	100 hours
Students	300 hours
(3 students at 2 hours a day for 10 weeks)	

This breakdown shows a ratio of one hour of cataloger's time to 25 hours of students' time.

All labels were obtained from the Avery Label Co., 200 Hilton Office Bldg., Denver, Colorado 80202; ordering description is:

Labels for spine: Fabric, Avery, Code 051631

Label Stock: FAB

Size: 1" \times 1 $\frac{15}{16}$ "

Color: Plain white

Adhesive: P-5

Packaging: 1M labels per roll

Labels for book pockets and cards: Avery, Pressure sensitive, Code 1014

Label Stock: ACP-P4

Size: $\frac{5}{8}$ " \times $\frac{7}{8}$ "

Color: Plain white

Packaging: DSC, MW5 (5 across with perforations between each row)

See our Exbibit  que    Montr  al

IN THIS modern world where we spend so much of our time following the latest exploits in space, mightn't it be a good idea to take time out and check on the exploration being done in our own world of special libraries. It is to this end that exhibitors are invited to come and purchase booth space at the Special Libraries Association Conference in Montr  al this summer.

The exhibitors are here to guide you to the future, to show the newest stars in their galaxies of products and services—so why not come along on this star trek; we promise not to let you get lost in the exhibit space. Don't do things the old fashioned way, looking through countless faceless names in catalogues and directories. Why not let your legs do the walking and visit the people behind those names and products and get the information you seek; let them tell it like it is.

Now to bring you back to earth; when you come to Montr  al please feel free to do your "thing"—don't worry about making an exhibition of yourself. After all, exhibitions will be the order of the day. Peaceful sit-ins at the Conference are all right, but demonstrate your support of the exhibitors and their exhibits.

Margaret Hawkins
1969 Montr  al Exhibits Committee

DURING my year as President-Elect, I wanted to find out what the members themselves thought about the organization. Since the President-Elect is committed to visit several areas around the country, it seemed logical to organize small discussion groups to convene at the same time—groups selected specifically to represent a broad spectrum of our membership. The only common criterion for those attending was that they be individuals who would speak up! We did not expect these discussions to solve problems, but rather to present problems stated clearly enough to allow progression towards solutions.

The first meeting in New York included members from the New York, Boston, Upstate New York and New Jersey Chapters. The original premise for an all-day, largely unstructured meeting was followed. While my own soul-searching had suggested such areas as: 1) the aims and objectives of SLA, 2) Association structure, especially the unrealized potential of Chapters, 3) decreasing personal involvement, and 4) what makes SLA different from other library associations, any facet of our concern was open for discussion.

Subsequently, meetings have been held in Chicago (Illinois, Michigan, Cleveland and Indiana Chapters), Albuquerque (Colorado, Heart of America and Rio Grande Chapters), San Francisco (Southern California, San Francisco Bay Region and Pacific Northwest Chapters), and Washington (Baltimore, Virginia, North Carolina and Washington Chapters).

While no meeting was like another, there were several common areas of discussion. In reporting a few of these, no attempt has been made to list them in order of importance, or to eliminate overlap.

Annual Conference

Many members feel that a thorough evaluation of the Conference is in order. Although we have had Conferences for many years, do we really know much about the attendees—are they representative of the Association as a whole, are they mostly “first conferees” or “old timers,” does the Conference address their needs? Do we really know the purpose of our Conference? It was the consensus of the discussion groups that too much emphasis has been placed on the programs of the Divisions. An analysis of some of our past Conference programs indicated that these reflected weaknesses and strengths of the chairmen who felt responsibility for planning. Curtailment of time available to Divisional programs was suggested, replacing these with programs of more general interest.

Another suggestion was that Conference Committees encourage and promote more joint sessions when proposed Divisional programs overlap in interest. Another strong suggestion was that Association Conferences

be held every other year, with strong regional conferences being held on alternate years. Six or eight regions could be developed to reduce travel distances and permit greater member participation (less than one-fourth of the SLA membership attends the present annual meetings).

We might also try different kinds of groupings within our Conference structure, based on size of library or types of function, for example. There seemed to be a strong feeling that a greater percentage of the Conference planning might be done at Headquarters—with the understanding that whenever Headquarters is looked to, we must provide increased financial support to be able to hire the necessary staff.

Internal Communication

Even though some communication takes place through “News and Notes” (now included in the pages of *Special Libraries*), there were strong indications of need for better communication from Headquarters to the Divisions and Chapters, and for more

personal contacts. Perhaps our publications program needs to be revamped. The functions of the DLO and CLO could be strengthened, perhaps through Headquarters involvement rather than by volunteer Committee chairmen.

Involvement

A perusal of the committees of the Association and its units brings to light the same names and faces as active year after year. Obviously, we are not attracting, keeping, and involving new members. In fact, we find that we do not really know our membership. One Chapter reported from a membership survey that about 25% was the "core" group and could be expected at almost every meeting. Another 25% appeared at one meeting during the year. But the remaining 50% had not been seen within the year, if ever. Some of the names carried on the roster were unknown to the active members.

While we are aware that we will not be able to attract all of a Chapter's members to a meeting during any one year, we should be able to do better than 50%. If members are not attending meetings, we need to find the reason. Is it our Chapter programs? Why did a member join if not to participate? How can we fill their needs? How can we find what these needs are if they are not expressed? One of our major problems, then, is that of combating a feeling of apathy, and of increasing personal identification with SLA programs.

Public Relations Activities

All sessions discussed some facet of public relations. The problem is two-sided: relating to the outside, to our users and our management; and relating among ourselves in the library community.

Membership

Much discussion centered around membership: who our members are, why they joined SLA, what they expect from membership. The period of the main advantage of membership being the sociability has passed after sixty years, and we now should be more concerned about improving our status

as librarians, improving our financial return, and enlarging our personal development.

Structure

Structure is, obviously, an area covered in connection with many other points, but considered in every session. A frequent question concerned the usefulness of Divisions. Many Divisions appear to have as their prime function the preparation of a program during the annual Conference, and many of these programs proved weak. Many Chapters, too, are relatively inactive. Perhaps we are over-organized; when you consider our many Chapters, Divisions, Standing Committees, Special Committees, appointed task groups to the Board, and Advisory Council, there are an impressive number of groupings. The proctor innovation has already suggested elimination of some Committees and the merging of other Committees to reduce the total number and to eliminate those which are non-productive.

Other Questions

There were many other questions raised and suggestions made. Continuing education, evaluation of goals and objectives, forward planning, joint meetings with other (non-library) associations, usefulness of Division and Chapter bulletins and their costs, lobbying, and relationships with library schools, all were discussed.

The Program

These, then, are a few of the questions raised. They must be faced, and solutions found. It is my thought to synthesize these into a series of problems which could be used as Chapter projects during the next year. I hope to be able to secure enough volunteer Chapters to assign two Chapters to each task. Results from both a large and a small Chapter, located in different geographic areas, should suggest representative positive directions for the forward movement of Special Libraries Association.

ROBERT W. GIBSON, JR.
President-Elect, SLA

Election Returns

Florine Oltman* was elected to the office of President-Elect of the Association, and Keith G. Blair to Chairman-Elect of the Advisory Council. Two new Directors are Edythe Moore and Loyd R. Rathbun. All will take office at the Annual Business Meeting in Montreal. At the same time ROBERT W. GIBSON, JR. will automatically succeed HERBERT S. WHITE as President; HELEN J. WALDRON automatically succeeds MRS. CHARLOTTE S. MITCHELL as Chairman of the Advisory Council.

JEAN DEUSS continues as Treasurer in the third year of her term of office. MRS. GLORIA M. EVANS and EFREN W. GONZALEZ will serve the third year of their three-year terms as Directors. ROSEMARY R. DEMAREST and BURTON W. LAMKIN will be serving the second year of their three-year terms as Directors.

* EDITOR'S NOTE: In February 1969 issue of this journal (p. 109) Miss Oltman's Chapter affiliation was incorrectly stated to be "... the Alabama Chapter (now the South Atlantic Chapter) ...". The Publications Department staff has been studying maps of the southeastern states, and is now quite certain that the Alabama Chapter is situated to the west of the territory of the South Atlantic Chapter. Our apologies to Miss Oltman and to the Alabama Chapter.

Contribution to SLA Scholarship Fund

THE H. W. WILSON FOUNDATION, INC. has again made a generous contribution to SLA's Scholarship Fund. A check for \$4,000 has been received from Howard Haycraft, Chairman of the Board. The H. W. Wilson Foundation is an educational and charitable foundation established by the late Mr. and Mrs. Halsey W. Wilson.

The Association is grateful for the continuing interest and support of our Scholarship Program by Mr. Haycraft and the Directors of the Foundation.



Lt. Gen. A. P. Clark, commander of Air University, Maxwell AFB, congratulates Florine Oltman, chief of the Bibliography Branch of the Air University Library, on her recent election as President-Elect of the Special Libraries Association. Also on hand were Robert Lane, chief of the Reader Services Division, and Robert Severance (right), director of the Air University Library.



USAF Photo

MEMBERS IN THE NEWS

Janet Bogardus, chief librarian of the Federal Reserve Bank of New York since 1954, retired from the bank on Jan 31. Miss Bogardus has served SLA in a number of noteworthy capacities including: chairman of the Financial Division (1956/57) and chairman of the Finance Committee (1964/66). She taught the course in business and economics literature at the School of Library Service of Columbia University from 1956 to 1966. **Elaine Jones** . . . from assistant chief librarian to chief librarian of the bank. **Jean Deuss** . . . from senior librarian to assistant chief librarian.

Mrs. Rita Estok has joined the staff of Texas A&M University Library as assistant research librarian . . . in charge of a joint project of Texas A&M and the State Technical Service Institute to "revise and update a catalog of research facilities in Texas."

The Parke-Davis Review (no. 6, 1968) features two prominent SLA'ers: **Mrs. Gloria Evans**, librarian of the Production and Engineering Department in Detroit, and **Gertrude Losie**, who heads the Research Libraries in Ann Arbor and Detroit. Mrs. Evans is an SLA Director; Miss Losie is a past chairman of the Pharmaceutical Division.

Mrs. Audrey Grosch, University of Minnesota Libraries, presented a paper to the Division of Chemical Literature, American Chemical Society in Minneapolis Apr 13-18. The title of her paper is "Systems Considerations Facing the Corporate Chemical Information Center and Information Specialist."

Peggy Harper, assistant librarian of the Louisiana State University Law Library, is president of the Louisiana Library Association; she is a past president of SLA's Louisiana Chapter.

Floyd L. Henderson is now librarian of Control Data Corporation's corporate library, Minneapolis.

Elsa Loacker Jones has received an Honor Certificate from the Freedoms Foundation at Valley Forge for "outstanding achievement in bringing about a better understanding of the American Way of Life in 1967."

Virginia LaGrave, librarian at Tinker Air Force Base, Oklahoma, was named as the outstanding librarian in the Air Force Logistics Command's library competition. She is serving a second six-year term on the Oklahoma Council for Libraries. Miss LaGrave is a past president of SLA's Oklahoma Chapter.

Ruth A. Longhenry . . . to director of the Army War College Library, Carlisle Barracks, Pennsylvania. She has served in several capacities on the library's staff since 1951. (Miss Longhenry's photo appeared in the April issue, p. 248.)

Lee Mosley . . . to coordinating librarian of the University of California Medical Center Library, San Francisco.

Mary Quint has been appointed director of the "Library Careers" office in Syracuse, N. Y.; the office is co-sponsored by five public library systems in upstate New York.

SLA Authors

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Hajós, Elizabeth M. Sigmund Jakob Apin's Handbuch für den Sammler von Bildnisstichen. *Philobiblon*, no. 1, 3-26 (1969). (Sigmund Jakob Apin's *Manual for the Collector Engraved Portraits*. [Nurnberg, 1728])

Hutson, Jean Blackwell. Harlem: A Cultural History. *Bulletin of the Metropolitan Museum of Art* (Jan 1969). A selected bibliography of material in the Schomburg Collection of Negro Literature and History, New York Public Library.



THE president-elect of SLA's Oklahoma Chapter is serving in the 32nd Oklahoma State Legislature as a representative from Oklahoma City's District 97. Mrs. Atkins' middle initial is D. People who know her agree it is "d" for "doer."

Since 1963 she has been chief of the General Reference Division, Oklahoma State Library and Acting Law Librarian. She has also served in school, public and university libraries. In addition to her activities in SLA, Hannah Atkins is a past president of the Southwestern Chapter of the American Association of Law Libraries, past president of the Visiting Nurse Association, and has served on numerous state commissions and civic associations with interests ranging from Title III ESEA to the Oklahoma City Symphony.

Mrs. Atkins taught French in high school in her native city, Winston-Salem, N. C., was a newspaper reporter and later a research assistant in biochemistry before she entered the University of Chicago library school (BLS 1949).

As the first Negro woman to serve in the Oklahoma Legislature Hannah Atkins is one of four women in the 100-member House. Her husband, Dr. Charles N. Atkins was the first Negro to serve on the City Council in Oklahoma City. Dr. Atkins is a psychiatrist.

Mrs. Atkins says that she has a "very understanding family" as she lists her many activities. Her oldest son, Edmund, is a graduate student at the University of Oklahoma, working on his thesis in urban studies. Charles, 16, is in the 10th grade. His partici-

The Honorable Hannah D. Atkins

pation in his mother's campaign last year has shifted Charles' interest from psychiatry to political science. Ten-year-old Valerie Ann completes the Atkins family. "Our favorite dinner table conversation is what's coming up in the Legislature," says Mrs. Atkins. She gets plenty of advice on how to vote from her children, but none from her husband—"He knows better." She is collaborating with her husband on a cookbook; Mrs. Atkins is a gourmet cook, and Dr. Atkins contributes recipes from his native Trinidad.

Representative Atkins is working hard on a fair housing bill. Her own first bill on immunization has passed the House and is waiting action in a Senate committee. Another favored bill is for the establishment of the People's Council (an office of ombudsman).

Mrs. Atkins admits that public office is not an easy life, particularly when the office holder has a deep concern for people. For recreation she likes to read. "I'm still a librarian at heart," says the new legislator. She reads political and social pieces, history and biographies. At present her emphasis is on history "because I feel that unless we have a good sense of perspective we can't make apt decisions."

The people of Oklahoma will be well served by the warmth and wisdom that is Hannah Atkins. Special Libraries Association salutes our Sooner Solon.

Statement of the Special Libraries Association Regarding HR 8839, A Bill to Establish a National Commission on Libraries and Information Science

For Presentation at a Meeting of The Select Subcommittee on Education, Committee on Education and Labor, U.S. House of Representatives, April 1969

Herbert S. White, President, Special Libraries Association

THE Special Libraries Association appreciates the opportunity you have offered to it to present its testimony on HR 8839, a bill to establish a National Commission on Libraries and Information Science. The Special Libraries Association was established in 1909, and has a present membership in excess of 7,000 individuals, primarily in the United States, with two Canadian Chapters. The membership of the Association is concentrated in libraries and information centers in business and industry, in governmental libraries and information facilities, and in specialized subject collections in universities and public libraries. The main emphasis of the Association and its programs over the 60 years of its existence is embodied in its slogan, "Putting Knowledge to Work." With this strong regard for meeting information requirements as they have developed, it will not be surprising to the Committee to learn that much of the developmental and pioneering implementation regarding new methods of storing and transmitting information, and regarding new and expanded services oriented to the direct needs of the library user, has come through our members in the libraries and information centers which they manage. While there is close coordination between ourselves and other associations in this field, most notably the American Library Association and the American Society for Information Science, the Special Libraries Association represents a unique and significant part of the profession concerned with librarianship and information science, and we appreciate the opportunity to be heard.

The Special Libraries Association considered the Report of the National Advisory Commission on Libraries at meetings of both its Board of Directors and its Advisory Council in January of this year. After considerable discussion, the Board of Directors voted its endorsement of the Report, and specifically of its recommendation for the establishment of a National Commission on Libraries and Information Science. In view of this, we endorse the proposal of HR 8839 to establish such a Commission.

In further discussion, the Board of Directors of the Special Libraries Association also expressed its support of the proposed establishment of a Federal Institute of Library and Information Science, and stated our strong interest in participating in the planning and implementation of this Institute. Additional feelings centered on what we felt were shortcomings and omissions in the initial report, not for the purpose of criticism, but rather with a positive view toward correction of any such deficiencies in contemplated legislation. In the specific comments I will now make I speak for myself as an individual, although, as President of the Special Libraries Association, I think I am reasonably cognizant of the interests in this regard of much of the mem-

bership. I will also, in the interest of the Committee's time, restrict my comments to those areas in which the Special Libraries Association can speak from a uniquely knowledgeable position, and will avoid repetition of our agreement with supporting testimony presented by other Library and Information Science Associations. This lack of comment, however, does not and should not be construed to imply lack of support.

I urge that in the establishment of the National Commission, in the selection of its membership, and in the delineation of its specific responsibilities, greater emphasis be placed on the interaction with and reliance upon special libraries and information centers, particularly as these occur in the private sector. The assumption is frequently made, and perhaps inadvertently perpetuated in the Report of the National Advisory Commission on Libraries, that most such specialized collections are small, that they serve only the limited body of information users within the organization, and that they draw heavily on the resources of public and university libraries. While such reliance and usage certainly do occur, it is only part of a two-way communication street. For many specialized disciplines, the great information resources are in fact lo-

cated in specialized collections held by governmental agencies, non-profit foundations, and private corporations. A total effective nationwide resource utilization program, such as I am sure is envisaged by the National Advisory Commission and by the sponsors of HR 8839, must take cognizance of the existence of these specialized collections, and must consider equitable means to draw them into the total resource.

A second point I would like to stress is the need for recognition, in the enabling legislation and in the charter and plan of the National Commission on Libraries and Information Science, of the fact that the libraries and information centers of our nation must deal with information and knowledge embodied in many forms, and must be able to deal successfully with these regardless of format. Books and periodicals are generally and immediately thought of as prime conveyors of information. The report literature, representing a more rapid and more informal method of presentation in response to urgent time pressures, is largely an outgrowth of World War II. Despite the popularity of this medium for a quarter of a century, little cognizance has been given to this significant method of information storage and transmission, and national consideration of this question has been noticeably and regrettably lacking. In addition, our libraries and information centers are, in increasing degree, relying on other forms of media, including audiovisual materials, slides, films, records, clippings, microfilm and other microforms, magnetic tapes and other formats for compressed storage and transmittal. None of these is in any way more or less significant than any other. What is significant is the fact that the National Commission on Libraries and Information Science must recognize its responsibility to deal with information in all formats, presently available and contemplated. Many of these information formats introduce problems and require an expertise in areas outside what has long been considered "traditional" librarianship.

I will perhaps startle the members of this Committee when I state that, in my judgment, the most significant problem facing American libraries is not one of money. Having said this, let me quickly add that adequate financial support of library programs at all levels of our

society is a critical requirement for the success of any national program, and the Special Libraries Association and I, personally, certainly support both the recommendations of the National Advisory Commission and of other witnesses in this regard.

The most significant problem, in my judgment, however, involves the investigation, determination, and implementation of programs for standardization, cooperation, and shared utilization of materials and analysis. With the critical shortage of funds which all libraries and information centers face, much money is inefficiently allocated at the local level to redundant and overlapping efforts in ordering and processing because of a lack of standard approaches of universal acceptance. Selection programs are only beginning to take cognizance of other selection programs in cooperative endeavors, which might permit the acquisition of more materials which could be justified on a shared cost but not individual basis. Things are beginning to happen in this area but what has happened has only served to emphasize what can still be done and should be done. To a great extent, multiple and redundant intellectual analyses of acquired materials, where specialized approaches for a unique reader population cannot be justified, still take place, and the emphasis on materials acquisitions is still to a great extent on the construction of individual monuments of knowledge rather than on the total information requirements of the nation. One user's information requirements should be equally well served if his library does not have a specific item, but another library does and he can have access to it quickly and simply. President Johnson's charge to the National Advisory Commission on Libraries invited specific recommendations in this area, which the Commission was not able to give, largely because of pressures of time. It is essential that the proposed National Commission face these questions squarely and courageously. The problems posed are far from simple, and enter the sensitive area of potential government dictation and the freedom to read. Nevertheless, development of a national program, and investigation, development and implementation of the technological advances to make this possible, can only practicably come about through the federal government, and it is my hope that the National Advisory Commission

will consider this a matter of immediate priority. Since the technological developments to accomplish these objectives involve independent problems of complex magnitude, the establishment of a Federal Institute of Library and Information Science, to serve as the principal center for basic and applied research, as proposed in the report of the National Advisory Commission on Libraries, is considered as a matter of critical importance, to be implemented through proposed legislation as rapidly as possible. Much of the basic technology to accomplish national interactive networks exists. What does not exist are the applications design and engineering to produce equipment optimally designed for use in libraries and information centers, the cost analyses necessary, the federal support needed to implement more experimental and pilot programs, and the federal inducement to libraries to urge compliance. Such development is, in my judgment, crucial. Sharing of national resources cannot proceed very efficiently if it must depend on the manner in which the U.S. mails handle interlibrary loan packages.

One further comment will address itself to the composition of the proposed National Commission. The problems concerning adequate library and information service for a nation are complex, and require an understanding of and deep involvement with the many factors which must be considered. A proposed limitation in the number of librarians and information specialists is, I think, sound, although the limitation to one-third of the Commission membership is perhaps unduly constrictive. Most significant is the need, in the selection of membership with "special competence or interest in the needs of our society for library and information services," for the choosing of individuals who provide not just scholarship and dedication, but also some appreciation of the ramifications of present-

day problems in information transmittal and usage. If this is not done, the Commission will again spend much of its time on a primer of familiarization, which will delay its work and limit its ability to reach direct conclusions and make specific recommendations.

The problems which confront our nation, in its need and striving to provide adequate and efficient library services to all of its citizens, are almost overpowering and their solution will require our very best efforts. It should not be inferred from what I have said earlier that the emphasis is primarily technological. It is more than that. What is needed is a total re-examination of the techniques and value systems which govern library service today—a re-examination, in the light of the needs of today's and tomorrow's societies, of the level of access to library materials to which our citizens are entitled, and of the adequacy and relevance of the information service which we supply. Our techniques and our standards have remained largely unchanged, while the society in which our libraries and information centers function has been altered drastically.

The National Commission on Libraries and Information Science must spearhead these searching inquiries, and it is not difficult to presage a formidable and complex task. It is important that the legislation to establish this Commission clearly point to this challenge, as HR 8839 does, and that the Presidential appointees to the Commission be selected for their competence for and willingness to undertake such a major assignment.

As a final comment, I would like to re-emphasize our support of this legislation to give cognizance to this area of great national concern and responsibility. The Special Libraries Association, and its membership, pledges its cooperation and assistance in any manner in which this can be effectively rendered.

Call for Papers

61st Annual Conference Special Libraries Association

Detroit, Michigan
Sheraton-Cadillac Hotel
June 7-11, 1970

Theme:
The Changing Face of Special Libraries

PAPERS are cordially invited from all SLA members, library school students and faculty, and others for the programs of SLA's 61st Annual Conference in 1970.

The theme, *The Changing Face of Special Libraries*, is pertinent to our dynamic world and our place in it. A Greek philosopher said "nothing is permanent except change." Now, 2000 years later, his observation is still true. Every day sees changes in materials, processes, equipment, techniques and procedures. As librarians and information specialists we must be willing to make changes. Without a willingness to adapt, to be alert to methods of cost cutting, to improve performance, to increase productivity, and all other facets of good administration, we can soon become obsolete.

The papers, of approximately 1500 words, based on original research or development or on personal experience must not have been published nor presented previously to any national group. The papers are also considered for publication in *Special Libraries*.

Information and Instructions for Authors

1. Send the paper or the title of the paper and names of the authors accompanied by an abstract no later than Sep 15, 1969 to:

Mrs. Gloria M. Evans
Production and Engineering Library
Parke-Davis & Co.
Detroit, Michigan 48232

2. The abstract must not exceed 100 words. Please use the official abstract form (see next page). The abstract forms may be obtained from Mrs. Evans or from:

Special Libraries Association
235 Park Avenue South
New York 10003

In case of co-authorship, the name of the person expected to present the paper must be underlined. The name and the address of the institution or company sponsoring the paper should be given as well as the names and addresses of the current professional affiliations of the authors.

The author should prepare this abstract carefully so that it will arouse interest in his paper and do justice to it. The abstract should set forth the purpose of the paper, important results, and conclusions. Please avoid historical summaries and generalities. The abstract will be reviewed by the Conference Committee to determine its interest to SLA members. Notification of acceptance will be given no later than Nov 15, 1969.

Full text of all papers must be received by Jan 10, 1970.

3. Special Libraries Association has *first* right to publish all papers presented at its meetings. All papers are reviewed before acceptance. Papers not accepted for publication in the journal will be released to the authors.

4. Diagrams and data to be presented visually should be made legible through the use of large letters, heavy lines, and limited data on each illustration. Lettering should be readable from 150 feet. Projection equipment must be specified and requested when the abstract is submitted. An overhead projector is suggested.

5. No paper will be accepted unless an author expects to be present.

Future SLA Conferences

Jun 6-10, 1971.	San Francisco
Jun 4-8, 1972.	Boston
Jun 3-7, 1973.	Dallas

61st Annual SLA Conference

ABSTRACT OF PAPER FOR PRESENTATION AT DETROIT, JUNE 7-11, 1970

Abstracts of papers for the program should be received by *September 15, 1969*. Mail this short abstract (with two carbon copies on plain white paper) to:

Mrs. Gloria M. Evans
Production and Engineering Library
Parke-Davis & Co.
Detroit, Michigan 48232

Title of Paper _____

Expected length of paper (in words) _____

Where work was done (institution or company) _____

Author(s) (Please underscore name of person presenting paper) _____

Affiliation (institute or company) _____

Mailing address _____ Telephone _____

Choice of Divisions (if paper should be submitted for their program use):

1)

2)

Abstract (100 words maximum):

CHAPTERS & DIVISIONS

Indiana—On Apr 21 Dr. Peter Hiatt, Director of Indiana Library Studies reported on the work of the study program during the past year.

SLA/NY & NJ with ASIS/NY

Joint Seminar

Six Thursday evenings (Mar 6–Apr 10) were this year's Seminar on Indexing and Abstracting with four sponsors: the ASIS Metropolitan New York Chapter, SLA's New Jersey Chapter, and two groups of SLA's New York Chapter (Documentation and Technical Sciences).

Philadelphia—On Mar 11 at the Pedagogical Library the Chapter heard Sidney August describe the ERIC system of storage and retrieval of educational materials. May 15 is the date of the Chapter's annual banquet at the Alpha Club; the speaker will be Lisa Richette, attorney-at-law. The Social Science Group of the Chapter had an all day meeting at the Newcomen Society on Apr 12. The Sci-Tech Group sponsors an all day workshop on Apr 26: "Computer Tapes and Science Information Systems."

Rio Grande—On Feb 28 in Santa Fe members from Arizona, New Mexico and El Paso, Texas heard SLA President-Elect Robert W. Gibson, Jr.

Greater St. Louis—A theatre party on Mar 19 with the Greater St. Louis Library Club to see "Luther" was followed by a back stage tour. On Apr 19 . . . a joint meeting with the Heart of America Chapter with a tour of the new library of the University of Missouri, St. Louis.

San Francisco Bay Region—An Irish coffee party for library school students at the University of California, San Jose State College and the University of San Francisco was held on Feb 16 in Berkeley. On Feb 20 the Chapter was addressed by James Skipper, the new librarian of U.C., Berkeley. More than 30

assistants participated in the Chapter's "Library Assistants Workshop" on Jan 23–24.

Part II of the Anglo-American Cataloging Rules Workshop was held in San Jose on Apr 11–12. Part I was held in Spring 1968. The two workshops have been jointly sponsored by the Chapter and by California Library Association.

South Atlantic—The Chapter met at the Federal Aviation Library, East Point, Georgia, on Jan 24 and heard a discussion of air safety. The Feb 28 meeting at the First National Bank, Atlanta, heard a discussion on "Requirements of the Special Library of a Bank." At Georgia Tech on Mar 18 the topic, "Marc Records in the Special Library," was presented by John P. Kennedy, data processing librarian.

The Interim Florida Group met on Feb 1 in Gainesville; of the 65 persons present, about 25 attended a business meeting to plan for the proposed Florida Chapter.

Toronto—On Feb 27 the Chapter visited the library school and library of the Ryerson Polytechnical Institute, and then heard a discussion on "The Library Technician and Special Libraries," led by Muriel Morgan, head of the Ryerson Library School, and Alexis Jamieson, head of the Seneca College Library School. On Mar 20 Recordak of Canada Ltd. demonstrated the Miracode system, film processing equipment, microfiche and microfilming systems.

Upstate New York—On Apr 11 a meeting at the American Foundation for Management Research, Hamilton, N. Y. heard talks titled: "Why Don't Managers Use Libraries?" and "Preparing Librarians for Management."

Washington, D. C.—The 3rd Annual Continuing Education Workshop on Mar 22 was co-sponsored by the District of Columbia Library Association and SLA's Washington Chapter. The two sessions were titled: "Art of Presentation: Oral and Written" and "Art of Listening."

The Sci-Tech Group and the Military Librarians Group of the Chapter held a joint Mardi Gras dinner meeting on Feb 18. "The Case for UFO's: Flying Saucers Are Serious Business?" was the title of an illustrated talk.

LTP Reports to SLA

Marjorie E. Weissman

Library Technology Program, American Library Association, Chicago, Illinois 60611

MAY 1969 marks the 10th anniversary of the Library Technology Program of the American Library Association. In a statement issued on the occasion, Forrest F. Carhart, Jr., director of the Library Technology Program, said, "I am proud of the accomplishments of the Library Technology Program over the past 10 years. LTP has, I believe, made many worthwhile contributions to the library community in the areas of testing, research, publishing, invention, standards and product evaluation."

"In a profession," he continued, "that 10 years ago, had few guidelines or tools available to help the librarian make decisions on technical matters, LTP has made a significant impact. Its work is now known in many countries of the world—as nearby as Canada, as distant as Australia. It gives assistance and information free—and freely—to all who seek its help, whether it concerns a \$1,000 expenditure on audiovisual equipment, or the manufacture of rustproof paper clips."

Carhart recalled that the idea of a technical project to serve the needs of the library world originated with the Council on Library Resources, Inc., and out of this idea grew a proposal that the Council undertake a research-testing-standardization program in the field of library supplies, equipment, and systems. A grant of \$136,395 from the Council transformed the idea into a reality on May 1, 1959.

"How well the idea and the reality have matured is seen today in the range of LTP's activities," continued Carhart. "They encompass an information service, a subscription service, the development of standards, product development and testing, publishing and international cooperation."

"On this 10th anniversary of the Library Technology Program, I am particularly proud that we have been able to stimulate industry to bring to the market place products that answer the needs of librarians. We have done this in many ways, from speeches and in-

formal talks, to marketing our own LTP inventions. I am proud too, of *Library Technology Reports*, that every two months brings to subscribers much important information about products, and current technological news of interest to librarians. Its impact on the profession and on the library equipment and supplies manufacturing industry has been considerable, bringing with it an awareness by both groups of the need for better quality products and more intelligent purchasing.

"In another area," he stated, "we have made considerable progress in techniques of evaluating equipment and supplies in order to determine appropriate levels of performance and durability."

Carhart said that he was proud of reaching the point where we support, with our own effort, 57% of our operating budget, and 29% of research costs. At the beginning, 100% of the support for the Library Technology Program came from the Council on Library Resources, Inc.

Carhart added, "I must acknowledge gratefully, the assistance given by the Advisory Committee of the Library Technology Program. Over the years, we have benefited from both the sound advice of committee members, and their considerable goodwill."

Special Libraries Association has always been well represented on the LTP Advisory Committee.

"Finally," said Carhart, "I am proud of the Library Technology Program staff. From the beginning we have had a dedicated and intelligent staff always working in behalf of the program. Together with the library profession itself, they have made success possible."

SLA's Special Representative to the ALA/LTP Advisory Committee is Don T. Ho, supervisor of Technical Information Libraries, Bell Telephone Laboratories, Holmdel, New Jersey.

Toastmss

Having been trying to be a better speaker for some years in a Toastmasters Club, I was interested to see A. R. Roalman's "How to Give Successful Speeches" in the March *Special Libraries*. His article would have been much more helpful to me if he had provided more illustrations of his points.

O.K., I can look in *Life* and *Look* for drama. I can watch a dramatically produced television show. However, this gives me little knowledge of how to dramatize a speech. If he could be persuaded to write an article just on how to dramatize a speech and give several good illustrations, he could help me and others much more.

Since many of the readers of *Special Libraries* are women, it is too bad that Mr. Roalman didn't mention that International Toastmistress Clubs do the same thing for women as Toastmasters do for men. An important feature of the educational program in clubs of both organizations is evaluation with emphasis on *how* to become better.

It is all very well to receive precepts on how to give successful speeches. Most readers will not benefit much from the ideas expressed unless they do join the friendly, helpful organizations of Toastmasters or Toastmistresses.

J. Stephen Ogden
Technical Librarian
Ashland Oil & Refining Company
Ashland, Kentucky 41101

Mom-ism or Big Daddy?

The early reporting of SLA's business affairs in recent issues of your journal is commendable. That news of a January Board and Council meeting does appear in February and March issues of the journal (instead of April) is to be hoped for continuation, whether this results from an executive act of the Board or from an editorial decision.

Or is this prompt reporting a thinly disguised attempt to delude the masses? In February you reported that the Board "expressed themselves as favoring, in principle, investigation of a merger" with ASIS, and that three SLA members were appointed to a joint negotiating committee. Are we, the members, to believe that such a basic action was taken

without prolonged discussion by the Board and Council? But, no further report appears in the March issue.

I do plead guilty to a generation gap. This gap does allow me the uncomfortable luxury of remembering the ill-will generated by "secret" actions of some SLA Boards in bygone years. Are the elected officers of SLA *still* so out-of-touch with their electors that they need ask for no opinions? If so, greater care must be exercised by our Nominating Committees that our executive be consciously aware of the total members.

In 1969 SLA seems to be undoing the results of a "gag" rule imposed in 1957 during the Annual Business Meeting in Boston when our existing membership requirements were adopted. Limits on debate were set by parliamentary procedure; so that unorganized opposition was throttled. Yet today do we suffer from a restricted growth resulting from the Philip Wylie "Momism" and the golden calf of the MLS degree in 1957.

But, now in 1969, is the Board imposing another "gag" to prevent discussion of this ASIS merger proposal? Are we entering on an era of "Father Knows Best"? Staring out from my little backwater, I did thrill last year to Mrs. Usher's Presidential report. Hers was an open and above-board invitation from SLA to its sister associations to strengthen mutual bonds and to join forces for mutual benefit. Her words are, without question, the most significant official statements by any SLA President of recent memory.

When will we the members, of both SLA and ASIS, be told of all actions that will affect us?

E. With-Patrick
Transinfodex
New York, N. Y.

Skilled Vocation? Profession?

With all due respect to the views of both sides in the on-going debate about association membership standards, and realizing that the various pros and cons may well delineate those who have been members for a long period and those who have not, I pose a question. Why bother with a professional association at all? To go a bit further, why should anyone be concerned about difference—as far as special

librarians are concerned—whether the calling is classified a skilled vocation or a profession? The answers, obviously, depend on the individual's outlook tempered by his background, his current status and what he expects of the future.

Just what *is* a professional? The July 1968 *Public Relations Journal* carried an article by John Marston called "Hallmarks of a Profession." This was excerpted in the February 1969 *Advertising/Marketing Division Bulletin* with the realization that—though the publication is directed to an unrelated audience—the intelligent non-public relations professional could do some projecting and relating. As the *Bulletin* goes only to Division members, I wish to restate the case in the hope that readers of *Special Libraries* might relate aspects of the current discussion to the elements of a profession.

Marston cites eight characteristics which distinguish professions from merely skilled occupations. These characteristics must include at least: 1) a defined area of competence, 2) an organized body of knowledge of some consequence, 3) self-consciousness, 4) competence of entrants, 5) continuing education, 6) support of research, 7) aid in the education of

competent replacements, and 8) independence. The public expects three things from anyone who holds himself out as a qualified member of a recognized profession: competence, responsibility and a desire to serve the public. The professional has an obligation to clients, whether he be a doctor, lawyer, attorney, journalist or teacher. The professional has an obligation to others in the profession; he is judged as an individual, but his individual fortune rises and falls with the reputation of the group of which he is a member. The professional has an obligation to society; as social improvements are realized, new needs arise, thus creating more work for the professional, rather than less.

You will note that I have underlined nothing. Depending which side of the fence he's on, the reader may do that for himself.

There are always ways of rounding up bodies to fill a gap or serve a purpose. What you want to do with them, and what you want them to do for you, must always be weighted against the basic premises.

Valerie Noble
Editor, *Bulletin* of the
Advertising & Marketing Division, SLA

HAVE YOU HEARD ?

Salary Statistics

The 1968 edition of the annual "Salary Statistics for Large Public Libraries" is now available at \$1.50 a copy from: Enoch Pratt Free Library, Publications, 400 Cathedral St., Baltimore, Md. 21201.

Medical Specialty Checklists

Veterans Administration Library Service has published *Medical Specialty Checklists for Veterans Administration Medical Libraries* in six parts: urology, pathology, surgery, radiology, psychiatry, and internal medicine. Each list contains book and journal titles for a collection in a hospital involved in these specialties. Copies available on request to: VA Central Office Library (11A31), 810 Vermont Ave. NW, Washington, D. C. 20420.

Time Zone Chart

A four-color *Standard Time Zone Chart of the World* has been prepared by the U.S. Naval Oceanographic Office. The chart can be ordered from the Superintendent of Documents at \$1.00 per copy.

American Botanical Works

A checklist, *Early American Botanical Works, With a Miscellany of other Botanical Rarities*, has been prepared by Bernard Fortier, Biology Librarian of the Catholic University of America Libraries. Copies are available on request to: Dr. Fred Blum, Special Services Dept., Catholic University of America Libraries, Washington, D. C. 20017.

Inter-University Transit System

Fourteen provincially assisted universities of Ontario have completed the first year of a cooperative daily courier service for inter-library loans. The First Anniversary Report

is available on request to: Thomas F. O'Connell, Director of Libraries, York University, 4700 Keele St., Downsview, Toronto, Ontario, Canada.

New Slavic Center

The Association of Research Libraries has announced the establishment of the Slavic Bibliographic and Documentation Center at ARL headquarters, 1527 New Hampshire Ave., N.W., Washington, D. C. 20036. The Ford Foundation, through a grant of \$350,000, has provided support for a three-year period. ARL's Center for Chinese Research Materials which began its operations in May 1968 was also established with funds from the Ford Foundation.

New Libraries

DETROIT, Feb 26—Groundbreaking ceremonies for the Vera Parhall Shiffman Medical Library were held on the medical campus of Wayne State University. When completed in Spring 1970 the \$2,250,000 library will have study space for 800 persons; it is designed to hold 180,000 volumes.

AUSTIN, Mar 15—A \$2,300,000 construction contract was awarded by the University of Texas for the Moody Memorial Library at the Galveston Medical Branch. There will be seating for 598 readers; the book capacity will be 150,000 volumes with additional space for rare books and history of medicine collections.

BETHLEHEM, PA., Apr 7—Lehigh University's Mart Science and Engineering Library opened officially. The \$1,750,000 building has a capacity of 150,000 volumes and a seating capacity of 350. The building will also accommodate Lehigh's Center for Information Science.

Code Transition Committee

A USASI working group, X3.2F, has been organized as the Committee on Problems Associated with the Transition from Codes Currently in Use to USASCII (USA Standard Code for Information Interchange). Chairman of the working group is: John L. Little, NBS Office for Information Processing Standards, Instrumentation Bldg., Washington, D. C. 20234.

SIN—To Sin or Not to Sin ?

The Oct-Nov-Dec issue of NSF's *Scientific Information Notes* carried its own obituary notice; apparently budget reductions led to SIN's demise. It is understood that NSF had negotiated with ASIS to continue the publication. Two commercial publishers have announced their intention to publish a successor with the same title. This tangled web has led to a notice from NSF that the title is in the public domain and may be used by publishers or others at their own risk.

Conservation Studies

The Council on Library Resources has awarded a grant of \$75,000 over the next three years to the Imperial College of Science and Technology, London, for research on the scientific aspects of conservation of library materials. The work will be under the joint direction of J. C. Lewis (Imperial College) and Peter Waters (Royal College of Art).

Programs for Union Catalogs

The computer programs which produce the *Union Catalog of Medical Periodicals* of the Medical Library Center of New York have been re-written into 360/COBOL. The six new basic programs are available for \$2,500 (or \$500 for a single program). Contact: Mrs. Jacqueline W. Felter, Medical Library Center of New York, 17 E. 102nd St., N. Y. 10029.

Bio Tapes

A new magnetic tape information service, *BA Previews*, has been announced by Bio-Sciences Information Service of Biological Abstracts (BIOSIS). The tapes will be available about five weeks ahead of the printed versions of *Biological Abstracts* and *BioResearch Index*. The tapes are 9 track, 800 BPI, variable record length and variable block length. Contact: BIOSIS, 2100 Arch St., Philadelphia 19103.

Engineering Tapes

Engineering Index, Inc. has announced COMPENDEX (*Computerized Engineering Index*) to include all information contained in the monthly issues of *Engineering Index*. The 1969 subscription rate is \$6,000 for the

entire year. Tapes will be released on or before the publication date of the printed issue. The tapes are 9 track, 800 BPI, and are written in EBCDIC. The tape will be in TEXT-PAC input format (IBM's ITIRC/360 program). Contact: Engineering Index, Marketing & Business Services Division, 345 E. 47th St., N. Y. 10017.

Microfiche from the Clearinghouse

A new subscription service, "Selective Dissemination of Microfiche" (SDM), is now available from the Clearinghouse for Federal Scientific and Technical Information. Unclassified reports and translations can be ordered from any of several hundred basic subject categories, by originating agency, or by subject category within an agency. Distribution will be semimonthly. For information, write: Clearinghouse (152.12), U.S. Department of Commerce, Springfield, Va. 22151.

Quality Control for Science Information Input

The Council on Library Resources has made a grant to the Federation of American Societies for Experimental Biology, Bethesda, Md., for development of criteria for quality control of the input in science information systems. Criteria are needed for labelling the quality of the input so that, on retrieval, high quality information can be distinguished from low quality information.

"Instant Library" on Wheels

The compact mobile units are equipped with shelving, charging desk, bulletin board, tables, chairs, card catalogs, lighting and carpeting. Write: Bro-Dart, Dept. MT, Williamsport, Pa. 17701.

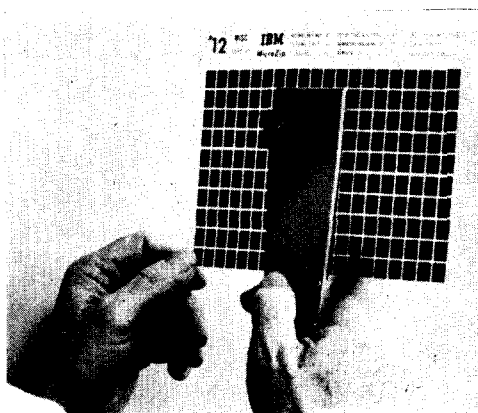
Marine Library

The Marine Museum at Fall River, Massachusetts has opened a specialized maritime reference library. The collection is devoted mainly to steamship history, naval history, and marine engineering and architecture. Use of the collection is limited to the museum's premises.

HAVE YOU SEEN ?



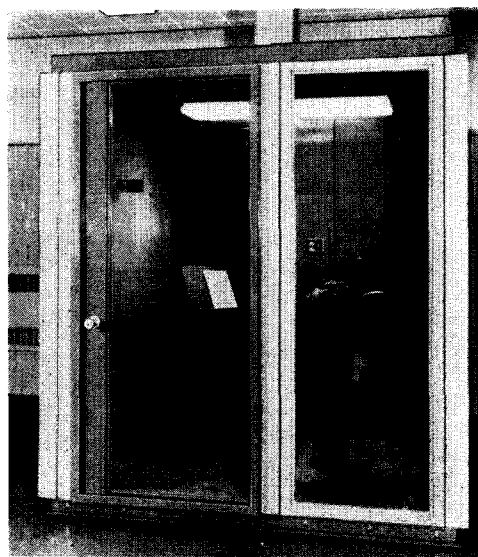
Folding conference tables in rectangular and side boat types with folding leg panels have been introduced by Metwood Manufacturing Company. Illustrated literature is available from E. B. Roscoe, Emeco Industries, Inc., Hanover, Penna. 17331.



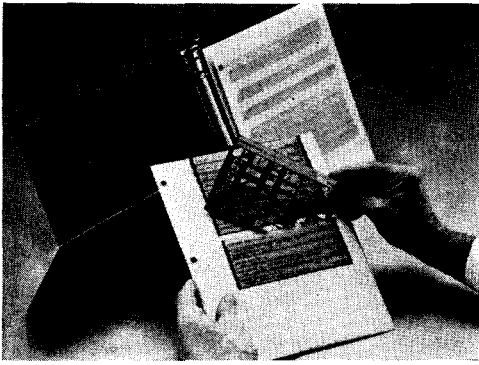
Hand held micro viewers (12- and 16-power magnification) can be used for microfiche, aperture cards and jacketed microfilm. Microforms are held in position by velvet plush lined pressure plates to eliminate damage to the film. The viewer can be used in rooms with normal illumination. Price: \$15.95 each. Contact: Taylor-Merchant Corp., Microfilm Division, 25 W. 45th St., N. Y. 10036.



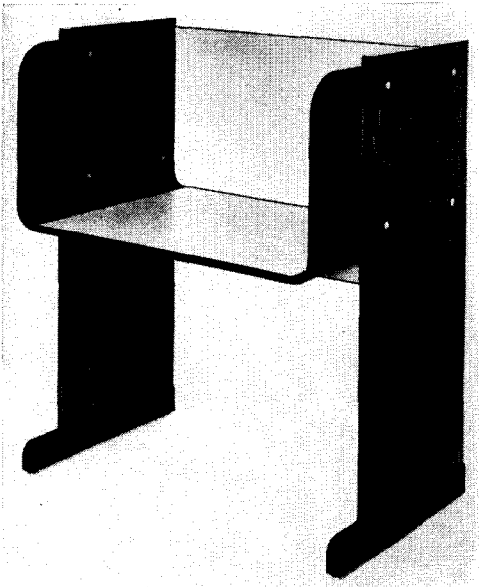
The PCMI 455-21 Ultrafiche Reader/Printer to display and copy images reduced 150X has been announced by National Cash Register Co. The unit will select any one of up to 3,200 micro-images on a 4 x 6 inch ultrafiche for full-size projection on the reader screen. One or more dry copies are produced electrostatically by use of a selector dial. Contact: NCR Industrial Products Division, Dayton, Ohio 45409.



Modular sound rooms that provide acoustical isolation can be used for individual study, business machines or music practice. Each module is demountable and movable. For specifications: Wenger Corp., Owatonna, Minn. 55060.



Microfiche storage in an easel-type 3-ring binder provides portability and visibility for 30 microfiche per binder. Aperture cards can also be accommodated in the die-cut sheets. For further information about this new Boorum & Pease product, write: Neil Robert Associates, 52 Vanderbilt Ave., N. Y. 10017.

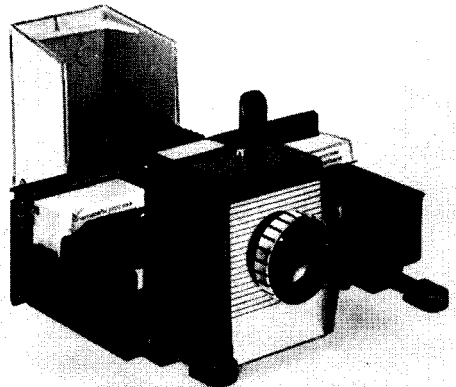


A softly-curved plywood shell of the LBC-300 carrel was designed to meet today's pressures to absorb more information more quickly. The light color desk top and back conform with the finding that a light, solid color to reflect light (rather than to absorb light) reduces the contrast between the desk surface and the printed material. The darker interior side panels result in the feeling of a

more private atmosphere. Contact: Library Bureau, 801 Park Ave., Herkimer, N. Y. 13350.



Portable noise-absorbing partitions provide informal but private conference areas. The lightweight "Sorbers" are said to absorb all incident noise and can reduce noise levels by as much as 15 decibels. The faces are finished with decorator burlap fabric. Contact: International Display Equipment Associates, 71 Lansdowne St., Boston 02215.



The "Stackloader" is a miniature projector for 35mm slides and filmstrips. The 22 oz. projector will hold up to 40 slides, either cardboard or glass mounted or intermixed, without loading into a tray or cartridge. The TMC Stackloader Model 1007S will sell for approximately \$12 through A-V dealers and T.M. Visual Industries, 25 E. 45th St., N. Y. 10036.

REVIEWS

Special Libraries: Development of the Concept, Their Organizations, and Their Services. Johns, Ada Winifred. Metuchen, N. J., The Scarecrow Press, 1968. 245p.

There is a grand design to this book. Comparative librarianship—valuable though its contributions to the body of library science could be—is rarely studied in the context of either special librarianship or library history. In this monograph the author, an Australian librarian, has attempted a comparative study of the development of the concept of special libraries in the United Kingdom, the United States and Australia.

Evidence of development has been sought through analysis of published statements both official and personal; in the proliferation of libraries in government, business and industry as well as in the growth of individual special libraries; and in the patterns by which special librarians have incorporated their particular interests in their professional associations. The method—not an easy one—has resulted in an impressive array of factual information.

Developments in Britain are examined first; then those in the United States, and finally, those in Australia are chronicled. Individually, these accounts add to the record of special library history by narrating this history in well-documented statements. The Australian segment goes further. Therein the author has been able to bring her own and her colleagues' personal knowledge to bear, thus adding a dimension. The author has had, apparently, some experience with this method and—though it is sometimes difficult to see the forest for the trees—she has, generally, presented the evidence competently.

The heart of comparative librarianship, however, lies in comparison and synthesis. The author faces this challenge boldly in short but significant statements following the U.S. and the Australian chronologies. These sections consist more of point-by-point comparisons than of syntheses, but one should not quibble over the imperfections of a prototype. It is sufficient that a prototype now exists for the comparative study of special librarianship and that it is a stimulating one, replete with implications for further studies in greater depth.

Though one should not quibble with an author who has, in the main, carried out well her grand design, one should quibble with a publisher whose editorial staff has not weeded out misspellings, British colloquialisms and inconsistent citations. Further, the editorial staff could, and should, have advised the author to relate her appended case study of Australian electrical engineering libraries to her main thesis in a more meaningful way or to publish

it separately. As a minimum, the editorial staff should have seen to the provision of a respectable index.

Perhaps the greatest advantage in this study of comparative librarianship is in the fact that the author is an active participant in only one of the cultures studied; in relation to the others, she is more objective than a participant could be. Rare indeed is such objective study of American special librarianship. To us, who are its daily participants, the parts of this monograph that deal thus objectively, and comparatively, with our own milieu may well be the most interesting, the most significant, and the most suggestive for further study.

Martha Jane K. Zachert
Associate Professor
School of Library Science
Florida State University
Tallahassee, Florida 32304

Sample Cataloging Forms; Illustrations of Solutions to Problems in Descriptive Cataloging. 2d rev. ed. of *Sample Catalog Cards* with a Section on Comparison of the Anglo-American Cataloging Rules and the ALA Cataloging Rules. Robert B. Slocum and Lois Hacker. Metuchen, N. J., The Scarecrow Press, 1968. 205p. \$7.50.

Six years ago the authors compiled for the use of the catalogers of the Cornell University Library System, a handbook, *Sample Catalog Cards*. When published, this proved an invaluable aide to other catalogers who must do most of their original descriptive cataloging. Now we have a new edition: revised to incorporate the Anglo-American Cataloging Rules; and enlarged to include sections on motion pictures, filmstrips, manuscripts, and pictures and slides. As in the first edition, the book is divided into separate sections for the type of material illustrated. Each section has its own table of contents, and the integrated tables of contents form the index to this part of the volume.

Part I could well be considered an illustrated dictionary of cataloging. The different problems are arranged alphabetically. In many cases there are definitions and explanations of usage. In parentheses after each term is the AACR section to which it refers. There are ample cross references.

Part II is a handbook compiled by a committee of the Cornell University Library System, and shows a comparison of AACR rules of entry with the ALA rules with a brief indication of the change. An index lists the ALA rule numbers with their equivalent AACR rule numbers.

No doubt there is a great deal of material in this book that many special librarians would not need. However, even if only one illustration would be required, I cannot think of a better source.

Jean Deuss
Assistant Chief Librarian
Research Library
Federal Reserve Bank of New York
New York, N. Y. 10045

PUBS

BIOGRAPHY

Isaac Collins: A Quaker Printer in 18th Century America. Richard F. Hixson. New Brunswick, N. J., Rutgers Univ. Press, 1968. xi, 241p. \$8.

DIRECTORIES

1968-1969 American Library Directory, 26th ed. —a Classified List of Libraries in the United States and Canada with Personnel and Statistical Data. Eleanor F. Steiner-Prag, ed. N. Y., R. R. Bowker Co., 1968. xiv, 1071p. \$25, U.S. & Canada; \$27.50, elsewhere.

The Bowker Annual, 1969. N. Y., R. R. Bowker Co., 1969. \$10.85, U.S. & Canada; \$11.95, elsewhere.

British Commonwealth and International Trades Index, 1968-69 ed. Epsom, England, Business Dictionaries, 1968. cxviii, 696p.

An Evaluation of British Scientific Journals. John Martyn and Alan Gilchrist. London, Aslib, 1969. 51p. 15s. *Its* Occasional Publ. no. 1.

Guide to American Directories, 7th ed. Bernard Klein, ed. New York, B. Klein & Co., 1968. xv, 588p. \$25.

International Library Directory, a World Directory of Libraries, 3d ed. 1969/70. A. P. Wales, ed. London, A. P. Wales Org., 1968. 1222p. £ 13 12s 6d; \$35.50, U.S. & Canada.

Research Centers Directory, 3d ed. Foreword by James L. Olsen, Jr. Archie M. Palmer, ed. Detroit, Mich., Gale Res. Co, 1968. 884p. \$39.50.

School Library Supervisors Directory, 3d ed. 1968-69. Arleane B. Garnett, comp. N. Y., R. R. Bowker Co, 1968. xii, 468p. \$12.85, U.S. & Canada; \$14.15, elsewhere.

Scientific and Technical Societies of the United States, 8th ed. Washington, D. C., Natl. Acad. of Sci., 1968. 221p. \$12.50. *Its* Publ. 1499.

Subject Guide to Books in Print 1968. 2 vols. Sarah L. Prakken and Ruth P. Shively, eds. N. Y., R. R. Bowker, 1968. xxxi, 2983p. \$19.25, U.S. & Canada; \$21.10, elsewhere.

Ulrich's International Periodicals Directory, Suppl. 3, 12th ed. N. Y., R. R. Bowker Co., 1969. 225p. \$7.95, U.S. & Canada (elsewhere \$8.75).

The World Almanac and Book of Facts: 1969 Edition. Luman H. Long, ed. N. Y., Newspaper Enterprise Assoc., 1969. 932p. pap. \$1.75.

LIBRARY & INFORMATION PRACTICE

A Basic Book Collection for the Community College Library. Helen Wheeler. Hamden, Conn., Shoe String Press, 1968. x, 317p. \$10.

Free Book Service for All: An International Survey. S. R. Ranganathan, A. Neelamegham and A. K. Gupta, eds. Mysore, India, Mysore Libr. Assoc. & N. Y., Asia Publ. House, 1968. 464p. \$9. (*Order* from Taplinger Publ. Co., N. Y.) Ranganathan Ser. in Libr. Sci., no. 21; Mysore Libr. Assoc. Ser., no.3.

Guide to Laws and Regulations on Federal Libraries: Compilation and Analysis. William Strauss, Armins Ruis and Ivan Sipkov, comps. N. Y., R. R. Bowker Co, 1968. x, 862p. \$24.95, U.S. & Canada; \$27.45, elsewhere.

Information Management: The Dynamics of MIS. R. L. Martino. Wayne, Pa., Management Dev. Inst., Div. of Information Industries, 1968. xxviii, 163p.

Librarianship in Canada, 1946 to 1967: Essays in Honour of Elizabeth Homer Morton. Bruce Peel, ed. Ottawa, Canada, Canadian Libr. Assoc., 1968. 205p. \$7.50.

Libraries for the People: International Studies in Librarianship in Honour of Lionel R. McCollvin. Robert F. Vollans, ed. London, Libr. Assoc., 1968. xiii, 265p. 62s 6d; 50s to members.

Public Library Systems in the United States, A Survey of Multijurisdictional Systems. Nelson Associates. Chicago, Am. Libr. Assoc., 1969. xvi, 368p. \$10.

Reader in Library Administration. Paul Wasserman and Mary Lee Bundy, eds. Washington, D. C., Microcard Edits, 1968. \$10.95 hardbound. Reader Ser. in Libr. and Info. Sci.

Readings in Library Science. Balwant Singh Gujrati, ed. Ludhiana, India, Lyall Bk. Depot, 1968. xv, 167p. Rs 15.

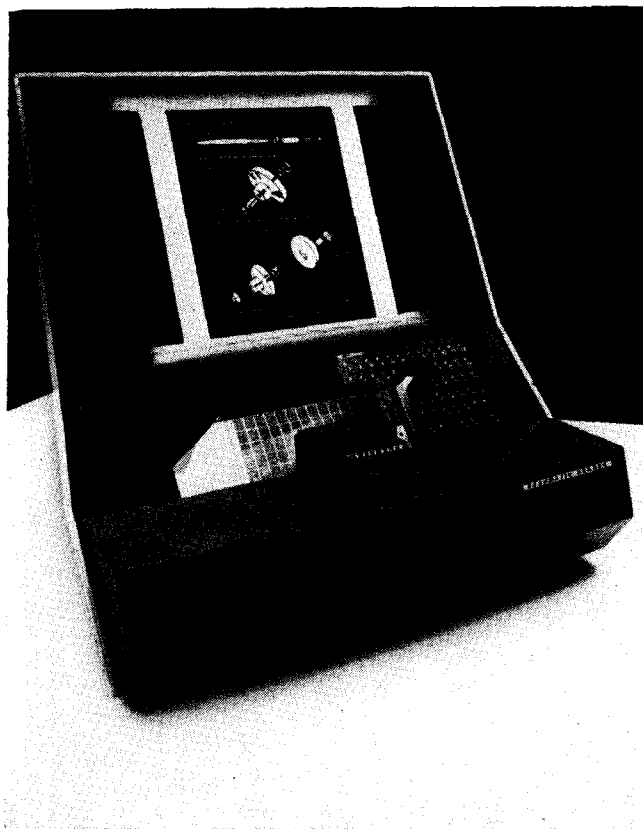
MISCELLANEOUS

Drafting, Technical Communication. Lawrence S. Wright. Bloomington, Ill., McKnight & McKnight Publ., 1968. xvii, 435p. \$8.60. (Distr. in U.S., Taplinger Publ., N. Y.)

The Law of Copyright Under the Universal Convention, 3d ed. Arpad Bogsch, ed. N. Y., R. R. Bowker Co, 1968. \$23.50, U.S. & Canada, \$25.85, elsewhere.

Nicholas Rubakin and Bibliopsychology. S. Simsova, ed., translated by M. Mackee and G. Peacock. Hamden, Conn., Archon Bks, 1968. 76p. \$3.50. World Classics of Librarianship.

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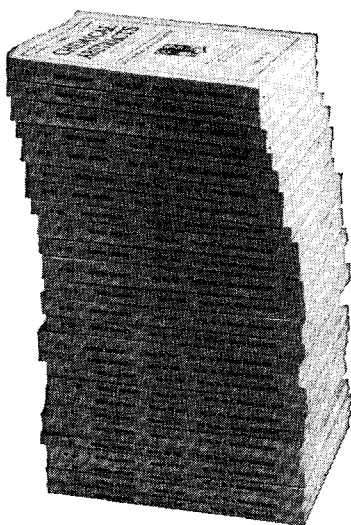
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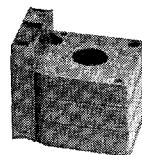
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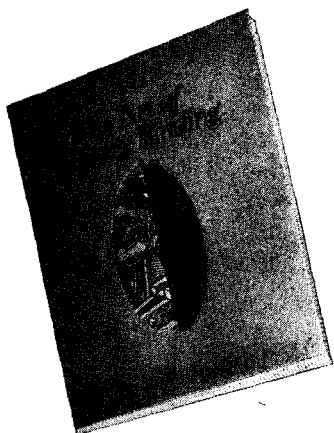
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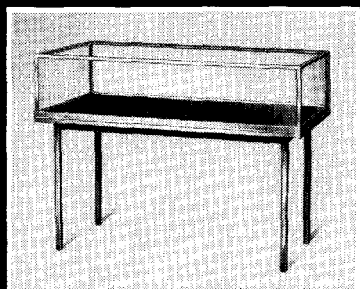
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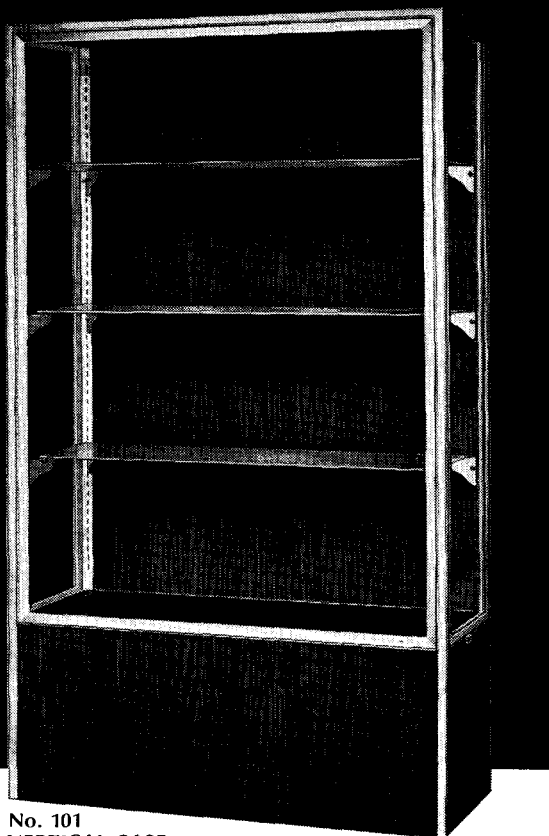
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